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A M E R I C A N RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, *Editor.*

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Room 12, Third Floor,
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AMERICAN RAILROAD CAR SPRINGS
MANUFACTURERS
JANMAR
STEAM NAVIGATION COMPAGNIES' MANUFACTURERS

NEW YORK

Manufacturers of
American Standard
Railroad Car Springs
and other Railroad
Equipment.

JOHN H. SCHUTTS & CO.

Second Floor, 100 Nassau Street, New York City.

JOHN H. SCHUTTS & CO.

NEW YORK

MURKIN AND MURKIN, LTD.

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No. 100 Nassau Street

AMERICAN RAILROAD JOURNAL.

IRON BRIDGES, BRIDGE & ROOF BOLTS, etc. STARKS & PRUYN, of Albany, New York, having at great expense established a manufactory with every facility of Machinery for Manufacturing Iron Bridges, Bridge and Roof Bolts, together with all kinds of the larger sizes of Screw Bolts, Iron Railings, Steam Boilers, and every description of Wrought Iron Work, are prepared to furnish to order, on the shortest notice, any of the above branches, of the very best of American Refined Iron, and at the lowest rates.

During the past year, S. & P. have furnished several Iron Bridges for the Erie Canal, Albany Basin, etc.—and a large amount of Railroad Bridge Bolts, all of which have given the most perfect satisfaction.

They are permitted to refer to the following gentlemen:

Charles Cook,	Canal Commissioners
Nelson J. Beach,	of the
Jacob Hinds,	State of New York.
Willard Smith, Esq.,	Engineer of the Bridges for
Messrs. Stone & Harris,	the Albany Basin.
Mr. Wm. Howe,	Railroad Bridge Builders,
Mr. S. Whipple,	Springfield, Mass.
	Engineer & Bridge Builder,
January 1, 1849.	Utica, N. Y.

TO RAILROAD COMPANIES AND BUILDERS OF MARINE AND LOCOMOTIVE ENGINES AND BOILERS.

PASCAL IRON WORKS.

WELDED WROUGHT IRON TUBES
From 4 inches to 1 in calibre and 2 to 12 feet long, capable of sustaining pressure from 400 to 2500 lbs. per square inch, with Stop Cocks, T's, L's, and other fixtures to suit, fitting together, with screw joints, suitable for STEAM, WATER, GAS, and for LOCOMOTIVE and other STEAM BOILER FLUES.



Manufactured and for sale by
MORRIS, TASKER & MORRIS.
Warehouse S. E. Corner of Third & Walnut Streets,
PHILADELPHIA.

To Railroad Companies, etc.


The undersigned has at last succeeded in constructing and securing by letters patent, a Spring Pad-lock which is secure, and cannot be knocked open with a stick, like other spring locks, and therefore particularly useful for locking Cars, and Switches, etc.

Companies that are in want of a good Pad-lock, can have open samples sent them that they may examine and judge for themselves, by sending their address to
C. LIEBRICH,
46 South 8th St., Philadelphia.

November 3, 1849. 6m*

Mattewan Machine Works.

THE Mattewan Company have added to their Machine Works an extensive LOCOMOTIVE ENGINE department, and are prepared to execute orders for Locomotive Engines of every size and pattern—also Tenders, Wheels, Axles, and other railroad machinery, to which they ask the attention of those who wish such articles, before they purchase elsewhere.

STATIONARY ENGINES, BOILERS, ETC. Of any required size or pattern, arranged for driving Cotton, Woolen, or other Mills, can be had on favorable terms, and at short notice.

COTTON AND WOOLLEN MACHINERY, Of every description, embodying all the modern improvements, second in quality to none in this or any other country, made to order.

MILL GEARING,

Of every description, may be had at short notice, as this company has probably the most extensive assortment of patterns in this line, in any section of the country, and are constantly adding to them.

TOOLS.

Turning Lathes, Slabbing, Plaining, Cutting and Drilling Machines, of the most approved patterns, together with all other tools required in machine shops, may be had at the Mattewan Company's Shops, Fishkill Landing, or at 66 Beaver street, New York.

WM. B. LEONARD, Agent.

HEAD QUARTERS FOR RUBBER GOODS.



The Union India Rubber Company,

MANUFACTURERS AND DEALERS IN EVERY VARIETY OF
GOODYEAR'S PATENT METALLIC RUBBER FABRICS,

Which they offer on the most liberal terms at their Warehouse,

NO. 19 NASSAU STREET, NEW YORK.

Articles which this Company has the exclusive right to make comprise in part

Beds,	Overcoats,	Life Preservers,	Mail Bags,	Camp Blankets,
Pillows,	Leggins,	Boat Floats,	Breast Pumps,	Travelling Bags,
Cushions,	Syringes,	Souwesters,	Saddle Bags,	Wading Boots,
Caps,	Canteens,	Gun Cases,	Clothing of all kinds,	Horse Covers,
Tents,	Buoys,	Portable Boats,	Carriage Cloth, assor.	Piano Forte Covers,
Bottles,	Maps,	Horse Fenders,	Hospital Sheetings,	Railroad Gum,
Tubs,	Sheet Gum,	Water Tanks,	Mattress Covers,	Hose, all kinds,
Caps,	Tarpaulins,	Army Goods,	Bathing Caps,	Showers Baths,
Pants,	Life Jackets,	Navy Goods,	Baptismal Pants,	Chest Expanders.

Together with all new applications of the Patent Rubber, which with Boots and Shoes, Packing, Machine Belting, Suspenders, Gloves and Mittens, Tobacco Wallets, Balls, Baby Jumpers, Elastic Bands, etc., etc., will be sold to the Trade at Factory prices.

* * All orders for special articles to be manufactured, should be accompanied with full descriptions and drawings.

October 20, 1849.

ETNA



THIS superior article for igniting the charge in wet or dry blasting, made with DUPONT'S best powder, is kept for sale at the office and depot of

REYNOLDS & BROTHER,

Sole Manufacturers,
No. 85 Liberty St.
NEW YORK.

And in the principal cities and towns in the U. States. The Premium of the AMERICAN INSTITUTE was awarded to the Etna Safety Fuse at the late Fair held in this city.

November 3, 1849.

DEAN, PACKARD & MILLS,

MANUFACTURERS OF ALL KINDS OF

RAILROAD CARS,

SUCH AS

PASSENGER, FREIGHT AND CRANK CARS,

— ALSO —

SNOW PLOUGHS AND ENGINE TENDERS OF VARIOUS KINDS.

CAR WHEELS and AXLES fitted and furnished at short notice; also, STEEL SPRINGS of various kinds; and

SHAFTING FOR FACTORIES.

For the above may be had at order at our Car Factory,

REUEL DEAN,
Elijah Packard,
Isaac Mills, SPRINGFIELD, MASS.

1848

Iron Safes.

FIRE and Thief-proof Iron Safes, for Merchants, Banks and Jewelers use. The subscriber manufactures and has constantly on hand, a large assortment of Iron Safes, of the most approved construction, which he offers at much lower rates than any other manufacturer. These Safes are made of the strongest materials, in the best manner, and warranted en-

tirely fire proof and free from dampness. Western merchants and the public generally are invited to call and examine them at the store of E. Corning & Co., sole agents, John Townsend, Esq., or at the manufacturer.

Each safe furnished with a thief-detector lock, of the best construction.

Other makers' Safes repaired, and new Keys and Locks furnished at the shortest notice.

H. W. COVERT,

cor. Steuben and Water sts. Albany.

August 24, 1848.

AMERICAN RAILROAD JOURNAL.



NEW YORK IRON BRIDGE COMPANY.

The Bridges manufactured by this Company having been fully tested on different Railroads, by constant use for more than two years, and found to answer the full expectations of their most sanguine friends, are offered to the public with the utmost confidence as to their great utility over any other Bridge now known.

The plan of this Bridge is to use the iron so as to obtain its greatest longitudinal strength, and at the same time it is so arranged as to secure the combined principles of the Arch, Suspension and Triangle, all under such controlling power as causes each to act in the most perfect and secure manner, and at the same time impart its greatest strength to the whole work.

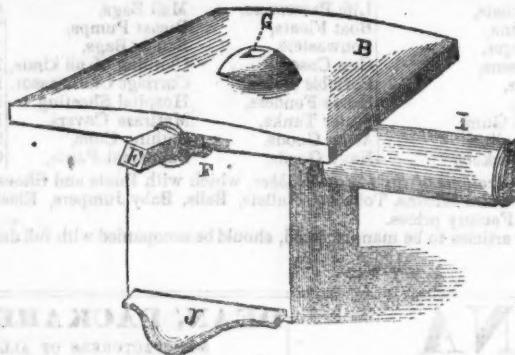
THE NEW YORK IRON BRIDGE COMPANY are prepared to furnish large quantities of Iron Bridging for Railroad or other purposes, at short notice, and at moderate prices.

Models, and pamphlets giving full descriptions of the above BRIDGE, with certificates based on actual trial from undoubted sources, will be found at the office of the Company, 39 Jauncey Court, Wall st., or of W. RIDER & BROTHERS, 19 Nassau Street, where terms of contract will be made known, and where orders are solicited.

August 29, 1849.

M. M. WHITE,
Agent for the Company.

E. Harris' Patent Rotary Blacksmith Tuyere.



LETTERS Patent were issued January 9, 1849, to E. HARRIS, of Springfield, for an Improved Rotary Blacksmith Tuyere. Since that time there have been some hundreds put in operation, giving satisfaction and full proof of superiority over all others.

This Tuyere is so arranged that by one movement it can be changed from the largest work to the smallest; at the same time the fire is changed in proportion, thereby making a great saving in coal. Words cannot convey the full merits of this Tuyere; nor is it deemed necessary to speak in disparagement of other Tuyeres, as every smith is capable of judging for himself, and will give merit where merit is due.

I will simply say that there has not been a single instance where I have had my Tuyere put in use but it has given full satisfaction, and is recommended by all who have used them, as being superior to any other ever introduced. I would invite all to give them a trial; and the names of those using them being given, I hope it may induce others to try them, as they recommend themselves.

Western Railroad Shop, Springfield, Mass.
" Pittsfield, "

Connecticut val. " Springfield "

Hartford " N. Hampton "

New Haven " New Haven "

Norwich and Worcester, Norwich "

N. York and N. Haven, New Haven "

Saratoga and Whitehall, Saratoga, N. Y.

Vermont Central,

Hudson and Berkshire, Hudson,

L. Kingsley, Canton, Mass.

Hadley Falls Co. Ireland, W. Springfield, Mass.	
Sidney Patch, Boston, "	
Ames Manuf. Cor., Chickopee, "	
American Machine wks, Springfield, "	
Dean, Packard & Mills, "	
G. Frank Bradley, N. Haven, Conn.	
Andrew Baird, "	"
Collis & Lawrence, "	"
Slate & Brown, Windsor Locks,	
Gage, Nashua, N. H.	
Machine shop, Manchester, "	
Louis F. Lanney, Baltimore, Md.	
J. H. Baerdid, 179 Chambers st. N. Y.	
J. Fanning, Rochester, "	
G. W. Hunt, 41 Gold st.	"
Chamberlain & Waldo, Stevenson falls,	"
P. S. Burges, carriage maker, Hillsdale, "	
Samuel Miller, Albany, "	
J. Leggett, South Egremont, Mass.	
J. E. Harris, Berlin, Conn.	
John L. Graham, Albany, "	
David Daisell, Albany, "	
Rory & Wilcock, Albany, "	

Agents for the sale of Tuyeres:

B. S. Stevens in New York and Connecticut.
W. S. Seymour in Massachusetts and R. Island.
A. J. VanAllen has the Agency for the Western and Southern States, and is now travelling through those States. Any communication addressed to the patentee will receive prompt attention.

E. HARRIS, Patentee,
Springfield, Mass.

November 23, 1849.

and have received numerous rewards for their superior performance. Their Chronometers may be obtained from the Observatory of Liverpool, by order from H. & S., and at City Road, London. They are warranted to give satisfaction; but if not approved of, will be exchanged in New York, London, or Liverpool.

Rating, Cleaning and Repairs, at low charges. The Trade supplied on the most liberal terms.

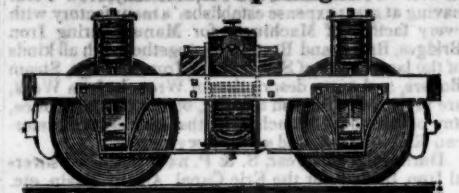
November 17, 1849.

CHRONOMETERS.

MERCHANTS, Ship Owners, Captains and others, are invited to examine the advantages offered in the purchase of Chronometers, by H. & S., Makers, 93 Wall Street, (up stairs,) in their superior quality and great reduction of price.

H. & S. have for many years been engaged in the manufacture of Chronometers, for the first houses in the trade and also, for the Navy of most Nations,

F. M. Ray's Patent India-rubber Car Springs.



India-rubber Springs for Railroad Cars were first introduced into use, about two years since, by the inventor. The New England Car Company, now possesses the exclusive right to use, and apply them for this purpose in the United States. It is the only concern that has tested their value by actual experiment, and in all arguments in favor of them, drawn from experience of their use, are in those cases where they have been furnished by this company. It has furnished every spring in use upon the Boston and Worcester road, and, in fact, it has furnished all the springs ever used in this country, with one or two exceptions, where they have been furnished in violation of the rights of this company; and those using them have been legally proceeded against for their use, as will invariably be done in every case of such violation.

The Spring formed by alternate layers of India-rubber discs and metal plates, which Mr. Fuller claims to be his invention, was invented by Mr. Ray in 1844.—In proof of which we give the deposition of Osgood Bradley, of the firm of Bradley & Rice, of Worcester, Mass., car manufacturers, and men of the highest respectability. In this deposition, in relation to the right of parties to use these springs, he says:

"I have known Mr. Ray since 1835. In the last of May or the commencement of June, 1844, he was at my establishment, making draft of car trucks. He staid there until about the first of July, and left and went to New York. Was gone some 8 or 10 days, and returned to Worcester. He then on his return said he had a spring that would put iron and steel springs into the shade. Said he would show it to me in a day or two. He showed it to me some two or three days afterwards. It was a block of wood with a hole in it. In the hole he had three pieces of India-rubber, with iron washers between them, such as are used under the nuts of cars. Those were put on to a spindle running through them, which worked in the hole. The model now exhibited is similar to the one shown him by Ray. After the model had been put into a vice, witness said that he might as well make a spring of putty. Ray then said that he meant to use a different kind of rubber, and referred to the use of Goodyear's Metallic Rubber, and that a good spring would grow out of it." There are many other depositions to the same effect.

The history of the invention of these springs, together with these depositions, proving the priority of the invention of Mr. Ray, will be furnished to all interested at their office in New York.

This company is not confined to any particular form in the manufacture of their springs. They have applied them in various ways, and they warrant all they sell.

The above cut represents precisely the manner in which the springs were applied to the cars on the Boston and Worcester road, of which Mr. Hale, President of this road speaks, and to which Mr. Knevitt refers in his advertisement. Mr. Hale immediately corrected his mistake in the article quoted by Mr. Knevitt, as will be seen by the following from his paper of June 8, 1848. He says:

INDIA-RUBBER SPRINGS FOR RAILROAD CARS.—In our paper yesterday, we called attention to what promises to be a very useful invention, consisting of the application of a manufacture of India-rubber to the construction of springs for railroad cars. Our object was to aid in making known to the public, what appeared to us the valuable properties of the invention, as they had been exhibited on trial, on one of the passenger cars of the Boston and Worcester railroad. As to the origin of the invention we had no particular knowledge, but we had been informed that it was the same which had been introduced in England, and which had been subsequently patented in this country; and, we were led to suppose that the manufacturers who have so successfully applied this material, in the case to which we referred had become possessed of the right to use that patent. It will be seen from the following communication, addressed to us by a member of the company, by which the Worcester railroad was supplied with the article upon which our remarks were based, that we were in an error, and that the springs here introduced are an American invention, as well as an American manufacture. How far the English invention may differ from it we have had no opportunity of judging."

law, to make them obligatory promissory notes payable on demand, at the place of business within this State of such person or association, to loan and circulate the same as money, according to the ordinary course of banking business as regulated by the laws and usages of this State.

Sect. 4. is as follows:

In case the maker or makers of any such circulating note or notes countersigned and registered as aforesaid, shall at any time hereafter, on lawful demand, during the usual hours of business between the hours of ten and three o'clock, at the place where such note or notes is or are payable, fail or refuse to redeem such note in the lawful money of the United States, the holder of such note or notes making such demand may cause the same to be protested for non-payment by a notary public under his seal or office in the usual manner; and the Comptroller, on receiving and filing in his office such protest, shall forthwith give notice in writing to the maker or makers of such note or notes to pay the same; and if he or they shall omit to do so for ten days after such notice, the Comptroller shall immediately thereupon (unless he shall be satisfied that there is a good and legal defence against the payment of such note or notes) give notice in the State paper, that all the circulating notes issued by such person or association will be redeemed out of the trust funds in his hands for that purpose; and the Comptroller shall be required to apply the said trust funds belonging to the maker or makers of such protested notes to the payment *pro rata* of all such circulating notes, whether protested or not, put in circulation by the maker or makers of such protested notes, pursuant to the provisions of this act, and to adopt such measures for the payment of such notes as will in his opinion most effectually prevent loss to the holders thereof.

Sect. 5. The Comptroller may give to any person or association of persons so transferring stock in pursuance of the provisions of this act, powers of attorney to receive interest or dividends thereon, which person or association may receive and apply to their own use; but such powers may be revoked upon such person or association failing to redeem the circulating notes so issued, or whenever, in the opinion of the Comptroller, the principal of such stock shall become an insufficient security; and the said Comptroller, upon the application of the owner or owners of such transferred stock in trust, may, in his discretion, change or transfer the same for other stocks of the kinds before specified in this act, or may transfer the said stocks, or any part thereof, or the mortgages, or any of them hereinafter mentioned and provided for, upon receiving and cancelling an equal amount of such circulating notes delivered by him to such person or association, in such manner that the circulating notes shall always be secured in full, either by stocks or by stocks and mortgages, as in this act provided.

Sect. 6. The bills or notes so to be countersigned, and the payment of which shall be so secured by the transfer of public stocks, shall be stamped on their face, "Secured by the pledge of public stocks."

Sect. 7. Instead of transferring public stocks as aforesaid to secure the whole amount of such bills or notes, it shall be lawful for such person or association of persons, in case they shall so elect before receiving any of the said bills or notes, to secure the payment of one half of the whole amount so to be issued, by transferring to the Comptroller bonds and mortgages upon real estate, bearing at least six per cent. interest, of this State, payable annually or semi-annually; in which case all bills or notes issued by the said person or association of persons, shall be stamped on their face, "Secured by pledge of public stocks and real estate."

Sect. 8. Such mortgages shall be only upon improved, productive, unencumbered lands within this state, worth, independently of any buildings thereon, at least double the amount for which they shall be so mortgaged; and the Comptroller shall prescribe such regulations for ascertaining the title and the value of such lands as he may deem necessary; and such mortgages shall be payable within such time as the Comptroller may direct.

The provisions of sections 7 and 8 are modified

by the laws of 1848 and 1849, as follows:

Law of 1848.

Sect. 2. The securities which banking associations or individual bankers hereafter to be organized under the provisions of the above recited act, passed April 18, 1838, and the amendments thereto, shall deposit with the Comptroller as security for the redemption of circulating notes issued to them by the said Comptroller, shall be New York State stocks in all cases to be or to be made to be equal to a stock producing six per cent. per annum, and it shall not be lawful for the Comptroller to take such stocks at a rate above its par value, or the securities shall not be less than one-half in such stock, and one-half in bonds and mortgages upon improved, productive, unencumbered lands in this State, exclusive of any buildings thereon, and mortgages bearing an interest of not less than seven per cent. per annum, and to an amount not exceeding two-fifths the value of said lands.

Law of 1849.

Sect. 1. The stocks which banking associations or individual bankers, now or hereafter to be organized under the provisions of the Act "To authorize the business of Banking," passed April 18th, 1838, and the amendments thereto, shall hereafter deposit with the Comptroller, shall be New York State stocks, in all cases to be, or to be made to be, equal to stock producing six per cent. per annum, or at least one-half the amount so deposited shall be in the stocks of the State of New York, as before mentioned, and not exceeding one-half in stocks of the United States, in all cases to be, or to be made to be, equal to a stock producing an interest of six per cent. per annum; and it shall not be lawful for the Comptroller to take such stocks at a rate above their par value, or above their current market value.

In this number we give only the main features of the New York system. We find it a matter so full of interest, and have so many inquiries on the subject, that we shall hereafter give full details of the law and the rules and regulations adopted by the Comptroller of the State in perfecting and carrying out the system.

New Jersey is adopting the same policy, and a bill containing similar provisions as the New York law, is now pending before the Legislature of that State. A similar movement is going on in Pennsylvania.

We believe there is not a merchant or business man of this city who does not concur in the opinion that our present banking law is an improvement upon the old, or the chartered bank system.

The chartered banks pay a tax to the State for their banking privileges, the free banks are exempted from this liability. The chartered banks, many of them, have surrendered their charters for the purpose of adopting the free bank system.

We give, in a condensed form, from the quarterly returns made to the Comptroller, the following statement showing the condition of the banks at periods designated by the State officers. The following exhibits the condition of the banks on the morning of the 22d Sept. and the 29th Dec. 1849. The Sept. report embraces returns from 187 banks and two branches. At the date of the last report there were 188 banks and two branches banking institutions in the State, but the report embraces reports from only 184 banks and one branch. The charter of the Bank of Auburn, Bank of Ithaca, Bank of Monroe and the Bank of Utica and its branch, expired on the 1st of January, 1850. The Bank of Ithaca and the Bank of Monroe did not report, and no statements were received from the Champlain, Walter Joy and Warren County Banks.

RESOURCES.

Sept. 22, 1849. Dec.

Loans and discounts except to directors and

brokers	\$81,118,923	\$83,070,705
Loans and discounts to directors	4,695,678	4,807,915
*All other liabilities absolute or contingent to directors	1,618,814	1,620,352
All sums due fm' brokers	2,239,618	2,314,790
Real estate	3,549,335	3,850,555
Bonds and mortgages	2,778,134	2,710,836
Stocks	12,362,748	11,755,700
From'y notes other than for loans and discounts	236,675	158,353
Loss and expense ac't.	480,158	615,053
+Overdrafts	183,163	164,899
Specie	9,020,175	8,066,313
Cash items	7,472,661	8,001,639
Bills of solv't b'ks on hand	2,233,964	2,611,608
+do suspended do	5,723	5,278
+Estimated value of same	2,855	1,902
Due from solv't banks on demand	9,354,206	10,193,737
do do credit	390,171	596,136
Due fm susp'd banks on demand	269,966	207,175
Estimated value of same	58,740	40,220
Due from susp'd banks on credit	4,418	...
Add for cents	605	597
Total resources	\$136,256,473	\$138,998,917

* The whole of this item and parts of the items marked † do not go into the general aggregate.

LIAABILITIES.		
Capital	\$45,588,320	\$45,541,708
Profits	7,314,626	7,580,284
Notes in circulation not registered	650,773	643,380
Registered notes in circulation	23,035,755	23,522,600
Due treas'r of state of N.Y.	2,567,127	2,809,238
Due depositors on demand	37,342,770	38,238,526
Due individuals and corporations other than banks and depositors	748,284	665,980
Due banks on demand	16,935,601	17,709,410
Due banks on credit	697,414	1,012,850
Due to others not included in either the ab've heads	1,375,797	1,270,046
Total liabilities	\$136,256,473	\$138,998,917

The following statement exhibits the condition of the banks on the 30th of June, the 22d Sept., and the 29th of Dec., 1849:

June 30, '49. Sept. 22, '49. Dec. 29, '49.		
Loans and discounts	\$82,960,422	\$85,814,601
Stocks	12,800,993	12,362,748
Specie	10,571,517	9,020,175
Cash items	6,479,829	7,472,661
Bank notes	2,979,349	2,233,964
Fine fm banks	11,746,279	9,744,377
Capital	44,929,505	45,588,320
Circulation	21,912,616	23,686,528
Deposits	35,604,999	37,342,770
Due to banks	20,994,078	17,633,015
Due canal fund	1,112,298	...

Upon comparing the returns of December with those of September, we find a diminution of only \$46,618 of banking capital, notwithstanding two of the safety fund and three of the free banks are not included in the last report. In the item of loans and discounts there is an increase of \$2,064,019, and in stocks a decrease of \$607,048. There is less specie by \$953,862 than there were in the vaults on the 22d of Sept. Of this amount, \$853,290 has been taken from the New York city banks. There is a slight increase of circulation and deposits, and in other items there are some slight changes, but they are not very important.

Plattsburg and Canada Railroad.—One half the capital necessary for the organization of the company to construct the Plattsburg and Canada railway has already been subscribed. The amount was \$1,000,000, and the subscribers are the following:

New York.

Plattsburg and Canada Railroad.—One half the capital necessary for the organization of the company to construct the Plattsburg and Canada railway has already been subscribed.

POPULATION OF THE UNITED STATES.
Table, Showing the Population of each State and Territory, as exhibited by the enumerations in Fifty Years, with its Decennial Rate of Increase during the same period.

STATES & TERRITORIES.	POPULATION.						DECENNIAL INCREASE.					
	1790	1800	1810	1820	1830	1840	1800	1810	1820	1830	1840	RATIO PER CENT.
Maine	96,540	153,719	228,705	298,335	399,455	501,793	571	50.7	30.4	33.9	26.2	
N. Hampshire	141,899	183,762	214,360	244,161	269,328	284,574	30.0	16.5	44.0	18.5	6.0	
Vermont	85,416	154,465	217,713	235,764	280,652	291,948	80.8	41.0	8.2	9.0	4.0	
Massachusetts	378,717	423,245	472,040	523,287	610,408	737,699	11.7	11.5	10.9	16.6	20.8	
Rhode Island	69,110	69,122	77,031	83,059	97,199	108,830	0.0	11.4	7.8	17.0	11.9	
Connecticut	238,141	251,002	262,042	275,202	297,675	309,978	5.4	4.3	5.0	8.1	4.1	
	1,009,823	1,233,315	1,471,891	1,659,808	1,954,717	2,234,822	31.1	19.3	12.8	17.7	14.3	
New York	340,120	586,756	959,049	1,372,812	1,918,608	2,428,921	72.5	63.4	43.1	39.7	26.6	
New Jersey	184,130	211,949	245,555	277,575	320,823	373,306	15.1	15.9	13.0	15.5	16.3	
Pennsylvania	434,373	602,365	810,091	1,049,458	1,348,233	1,724,033	38.6	34.4	29.5	28.5	27.9	
Delaware	59,096	64,273	72,674	72,749	76,748	78,085	8.7	13.0	0.1	5.5	1.7	
Maryland	319,728	341,548	380,546	407,350	447,040	470,019	6.8	11.4	7.0	9.7	5.1	
Dt. of Colum.	14,093	24,023	33,039	39,834	43,712	.....	36.8	28.9	29.2	23.3	.....
	1,337,456	1,820,984	2,491,938	3,212,983	4,151,286	5,118,076	36.3	10.7	9.3	13.7	23.0	
Virginia	748,308	880,200	974,622	1,065,379	1,211,405	1,239,797	17.6	10.7	9.3	13.7	2.3	
North Carolina	393,751	478,103	555,500	638,829	737,987	753,419	21.3	16.2	15.0	15.5	2.1	
South Carolina	249,073	345,591	415,115	502,741	581,185	594,398	38.7	20.1	18.1	15.6	2.3	
Georgia	82,548	162,110	252,433	340,987	516,823	691,392	96.4	55.1	35.1	51.2	33.8	
Florida . . . . .	.....	.....	.....	34,730	54,477	.....	.....	.....	.....	56.8	.....
	1,473,680	1,865,995	2,197,670	2,547,936	3,082,130	3,333,483	26.6	17.8	15.9	21.0	8.2	
Alabama . . . . .	.....	.....	144,317	309,527	590,756	.....	.....	142.0	90.8	.....	.....
Mississippi . . . . .	.....	8,850	40,352	75,448	136,621	375,651	356.0	87.0	81.0	175.0	.....
Louisiana . . . . .	.....	76,556	153,407	215,739	352,411	.....	100.4	40.6	63.3	.....	.....
Arkansas . . . . .	.....	14,273	30,388	97,574	.....	.....	112.9	221.1	.....	.....	.....
Tennessee	35,791	105,602	261,727	422,813	681,904	829,210	200.0	147.8	61.5	61.3	21.6	
	35,791	114,452	378,635	810,258	1,374,179	2,235,602	200.0	230.8	114.0	69.6	63.4	
Missouri . . . . .	.....	20,845	66,856	140,455	383,702	.....	219.5	110.9	173.2	.....	.....
Kentucky	73,077	220,955	406,511	564,317	687,917	779,828	200.0	83.1	38.8	21.9	13.3	
Ohio	45,365	230,760	581,434	937,903	1,519,467	.....	408.7	152.0	61.3	62.0	.....
Indiana	4,875	24,520	147,178	343,031	685,866	.....	403.6	500.2	133.0	99.9	.....
Illinois . . . . .	.....	12,282	55,211	157,445	476,183	.....	349.5	185.2	202.4	.....	.....
Michigan . . . . .	.....	4,762	8,896	31,639	212,267	.....	86.8	25.6	570.9	.....	.....
Wisconsin . . . . .	.....	.....	.....	.....	30,945	.....	.....	.....	.....	.....	.....
Iowa . . . . .	.....	.....	.....	.....	43,112	.....	.....	.....	.....	.....	.....
	73,077	271,195	699,680	1,423,622	2,298,390	4,131,370	200.0	158.0	103.5	61.4	79.7	
	3,929,827	5,305,925	7,239,814	9,654,596	12,866,020	17,069,453	35.01	36.45	33.35	33.26	32.67	

St. Louis and San Francisco Railroad.

The Map, published in Boston, by W. L. Dearborn, Civil Engineer, (with his letters to P. F. F. Degrand,) designates a line of railroad identical with the line delineated in the Map, which is annexed to a pamphlet, published at St. Louis, by I. Loughborough.

In this St. Louis pamphlet, (the authenticity of which is certified by the St. Louis Committee,) I. Loughborough thus demonstrates that this route is already sufficiently known to warrant a definite conclusion in favor of its being A GOOD RAILROAD ROUTE:—

"Let us now proceed [he says] to a topographical examination of the route from St. Louis to the bay of San Francisco. The route which we shall propose for this great railway is not one through a region unknown to science and the world. We make no guesses, as has been done, and must be done by all who advocate the claims of other routes. We do not say that passes through the mountains may be found, and that the probabilities are that a practicable line for a railway may be had from St. Louis to San Francisco, as has and must be said by the advocates of all the routes but ours. We shall propose a route which, with but slight variations, (and those variations undoubtedly for the better) has been already surveyed along its whole line—a route along which barometrical and other scientific observations have already been made—a route which has been minutely described by an authorized and eminently well qualified officer of the Corps of Topographical Engineers, and maps and profile sections of which are already de-

posited in the Topographical Bureau at Washington. We shall propose a route which was travelled by Mr. Henry, a fur trader of intelligence, as far as the vicinity of Fort Hall, in the year 1809—which has been familiarly known to the children of the mountains, from that day to this—over which they have constantly carried wagons and carts, laden with merchandise—and over which more than twenty thousand emigrants to Oregon, the Salt Lake, and California, have already passed. We shall propose a route, the last portion of which, from the Salt Lake to the Bay, was discovered by Mr. Peter Ogden, a fur trader in the employ of the Hudson's Bay Company, as far back as 1811; which has been repeatedly followed since by intelligent bodies of traders; by which a party of men, under the orders of Capt. Bonneville, proceeded to Francisco Bay; which has been traversed and described by Bryant, Bidwell, and other travellers—which has been surveyed by Col. Fremont, and over which emigrants, with families and wagons, have repeatedly passed, and more than thirty thousand men, with six thousand wagons, and one hundred thousand head of stock, are now passing."

Boston Courier, of Feb. 23d.

The tunnelling of the Andes is a mere question of dollars and cents. There is a great difference between the possibility and practicability of a work. There are unquestionably many possible routes for a railroad to the Pacific; and undoubtedly some practicable ones. Such, we are confident, surveys would show. But to decide upon the

practicability of a route because it has been traversed by teams, and to give the cost of such a work upon no more reliable data, is perfectly absurd. The profile of a section, drawn from such evidence, may involve a tunnel, though it shows a perfect plane. No progress is made by erecting theories, or in deciding upon routes, based upon loose evidence. Let us wait until the proper evidence is before the public, and we shall be saved an immense amount of speculation and conjecture, which can now only confuse ourselves and mislead the public.

Kentucky

Lexington and Frankfort Railroad.

We have the first annual report of this company, from which we make the following extract:—

"In submitting their first Annual Report, the Board of Directors have only to present a statement of the steps taken preparatory to making the road, and they must of necessity recount matters already familiar to most of the stockholders.

The charter of this company became effective by the subscription of two thousand shares of stock of one hundred dollars each, which being made, the State subscribed fifteen hundred shares and paid for it by a transfer of the old road as it now exists, with all the real and personal property pertaining thereto.

Upon the organization of this board, the first object to which attention was directed, was an inquiry into the practicability of changing the route at and near Frankfort, to avoid the inclined plane, and to reach the town and river by locomotive.—Surveys for that purpose were ordered, and the engineer reported upon several routes as practicable, recommending as preferable the one which is adopted. By diverging from the old road some four miles from Frankfort, the town can be reached by a grade of 60-70 feet in the mile. The estimated expense of making this portion of the road, and of taking up the old track and re-laying it with heavy iron, and upon timbers of locust and cedar, fell somewhat under \$300,000, and when is added the amount necessary to purchase and build depots and furniture, it would probably amount to that sum. The cash subscription was about \$200,000, and to make it available at all, either the road must be made new in part, and the remainder repaired, or else some mode devised by which additional funds could be procured. The Directors resolved to go on with the means they had, and defer their determination as to the ultimate plan until the further progress of the undertaking. They put the new grade under contract, bought one-half the iron required, and commenced the purchase of timber.—Finding, as they proceeded, that the prospects of the company improved, that favorable contracts for grading were made and materials generally very low, and every investigation giving them greater confidence of success, they called an informal meeting of the stockholders, and secured their approval of a plan to procure a loan of \$70,000."

This loan has been effected, and the means are now secured to reconstruct the road entirely. The company has purchased 2650 tons of iron for the purpose of relaying the track, and the work is going on with all rapidity consistent with a proper regard to economy.

The whole estimated cost of the road, not embracing depots nor its running furniture, is \$290,791.14. The whole length of the road is 29 miles.

The report bears date of the 18th of May last. We therefore defer the full statement of its financial affairs until after the next report is received.

Massachusetts.

South Shore Road.—Below give the circular recently issued by the Directors to the Stockholders:

To the Stockholders of the South Shore Railroad: At the last meeting of the Stockholders, the Directors were authorized to adopt such measures as they might deem expedient to relieve the financial difficulties of this corporation, and for that purpose

they recommend for adoption the following plan:	
The total cost of road paid to Jan. 1, 1850, is.....	\$378,863 34
Due O'Keefe & Co., on contract payable in stock.....	11,400
Land damages unsettled, (possibly).....	40,000
Making the whole expense of the road, complete.....	\$430,263 54
Of this there have been paid or provided for—	
Assessments paid.....	\$153,580
" due and unpaid.....	3,900
O'Keefe's claim payable in stock.....	11,400
	168,900
Leaving the amount of debt to be provided for.....	\$261,363 44

The corporation have surplus real estate, from the sale of which ten to fifteen thousand dollars may be realized, but this has not been taken into the account, but regarded as a resource against contingencies.

To pay this debt, it is proposed to create five thousand new shares, at \$25 per share, to be taken by stockholders only, in proportion to their stock, and payable in monthly instalments of \$5 per share, which will produce \$125,000; and the Directors have the pleasure to assure the stockholders that if this shall be done, they have secured the sale at par of the six per cent. bonds of the Company, payable at the expiration of a term of years, to an amount sufficient to pay the remainder of the debt.

As the Old Colony Railroad are bound to pay 6 per cent. on the cost of the road, the carrying into effect this plan, will at once make that which is now almost worthless a permanent dividend-paying stock; and the Directors hope that the stockholders will avail themselves of this opportunity to increase the value of their property to the extent of their ability.

ALFRED C. HERSEY, E. L. WHITE, WILLIAM HUMPHREY, JOSEPH LOUD, JR., JOHN W. LOUD, JAMES C. DOANE, LABAN SOUTHER, D. S. GREENOUGH, *Directors.*

It will be remembered that this road is only 12 miles long, and no motive power but its own. If we understand the circular, the South Shore stockholders will receive for their \$25, certificates of stock for \$50. If so, the actual liabilities of the company will be increased by the difference between the price of the new stock and par, which amounts to \$125,000 more, so that the actual liabilities will be \$555,263 54,—certainly one of the most expensive roads in the country.

RE-ELECTION OF RAILWAY DIRECTORS.

The annual period is now approaching when one third of the directors composing railway boards go out of office by rotation, but they are also eligible for re-election. It appears that there is a very general opinion among shareholders who have paid attention to railway matters, that the more prudent course for the proprietors to pursue at the ensuing meetings would be, to propose and elect from their own body new members, properly qualified, and of business habits, who are not directors at present in any railway company. Some consider that even a comparative ignorance of railway business would be rather an advantage, because the new members would have to inquire into railway matters at the various boards, and thus in acquiring the necessary information themselves, may have the beneficial effect of calling the attention of the old directors to matters which might have hitherto escaped their observation, and have remained neglected on that account. It is believed that no harm would arise from this measure, because all the new members if in error, could be out-voted by the old directors on any question that might be brought forward at the various railway boards. By selecting proper men to fill the vacancies alluded to, it is expected that a great advantage would arise to the shareholders, as it would be the first legitimate step towards the re-organization of railway boards, and the establishment of a new and improved system of railway management. Many of the old directors would gradually disappear from railway boards and the property of railway shareholders would be gradually relieved from the infliction of an ex-

travagant management, which might be said, in some instances, to have confiscated the property of shareholders to the extent of several millions.—When it is considered that above 400 railway directors annually go through the ceremony of "retiring by rotation," and, as a matter of course, are re-elected by the shareholders, it is not surprising that an erroneous system of railway management wherever established, should be pursued to the present time.—*English Railway Times.*

Legal Rates of Interest.

In the year 1546 the legal rate of interest for money loaned was fixed by law in England at ten per cent. per annum. In 1624 it was reduced by act of Parliament to eight per cent. per annum. During the reign of Queen Anne, and about the year 1710, it was reduced to five per cent., which is now the legal rate of interest in England, where no special contract exists. By the statutes of 1834 and 1840, the usury laws are entirely repealed, except as to contracts for ten pounds and under, and parties are allowed to agree, by contract, for any rate of interest, throughout England, for sums exceeding that amount.

In Ireland the rate of interest is six per cent.—We give below the legal rates of interest in the different States of the Union, with the penalties annexed, for the taking of usurious interest, in each State.

Maine—Six per cent.; forfeit of the claim for usury, with costs.

New Hampshire—Six per cent.; forfeit of thrice the amount unlawfully taken.

Vermont—Six per cent.; recovery in an action with costs.

Massachusetts—Six per cent.; forfeit of thrice the usury, with costs.

Rhode Island—Six per cent.; forfeit of the usury and the interest on the debt.

Connecticut—Six per cent.; forfeit of the whole debt.

New York—Seven per cent.; usurious contracts void.

New Jersey—Six per cent.; forfeit of the whole debt.

Pennsylvania—Six per cent.; forfeit of the whole debt.

Delaware—Six per cent.; forfeit of the whole debt.

Maryland—Six, and on tobacco contracts eight per cent.; usurious contracts void.

Virginia—Six per cent.; forfeit double the usury taken.

North Carolina—Six per cent.; contracts for usury void, and forfeit double the usury.

South Carolina—Seven per cent.; forfeit of interest and premium taken, with costs to debtor.

Georgia—Eight per cent.; forfeit three times the usury and contract void.

Alabama—Eight per cent.; forfeit Interest and usury.

Mississippi—Eight per cent.; by agreement as high as ten per cent.; forfeit the usury.

Louisiana—Five per cent., bank interest six, and conventional as high as ten; beyond that, contract void.

Tennessee—Six per cent.; usurious contracts void.

Kentucky—Six per cent.; usury recoverable with costs.

Ohio—Six per cent.; on written agreements may go as high as ten; beyond this contract void.

Indiana—Six per cent.; a fine of double the excess.

Illinois—Six per cent.; forfeit threefold the am't of the whole interest.

Missouri—Six per cent.: by agreement as high as ten; beyond this, forfeit of interest due and usury taken.

Michigan—Seven per cent.; forfeit usury and one-fourth the debt.

Arkansas—Six per cent.: by agreement as high as ten; forfeit usury and contract void.

Florida—Eight per cent.; forfeit interest and usury.

Wisconsin—Seven per cent.: by contract, any

amount agreed upon by the parties.

Iowa—Seven per cent.: by agreement as high as twelve; forfeit three times the excess.

Indiana.

Madison and Indianapolis Railroad.

We are in receipt of the annual report of the directors of this road, submitted to the stockholders at their annual meeting, held at Madison, on the 8th of January last. The following is an exhibit of the receipts and disbursements of the company the past year:

Received from transportation of frg't, passengers and U.S. mail.....	\$243,189 89
From other sources, as old metal sold, work done at shops for other roads and persons, &c.....	4,730 45

Making a total of..... \$247,920 34

Amount paid legitimate expenses of road, as per items in general account.....	\$137,530 77
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Amount paid state, in stock, as rent.....	1,152 04
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_____ \$138,682 81

Net earnings..... \$109,237 53

From which deduct payment of July dividend..... 50,737 60

Leaving a balance of..... \$58,499 93

Which gives to the stockholders a present dividend of four and one-half per cent. for the last six months, and eight and one-half per cent. for the year; with a surplus of \$1,246 78.

In comparing results with the preceding report, it must be borne in mind that the fiscal year of 1848 embraced but eleven months.

The total receipts from transportation and mail service, during the past year, it will be seen, are.... \$243,189 89

During the fiscal year of 1848, they were..... 212,095 85

Showing an increase of..... \$31,094 04

Notwithstanding this liberal increase, the receipts have fallen much below the estimates. The estimates would undoubtedly have been realized, but for circumstances entirely beyond control; indeed the two leading ones may be regarded as dispensations of divine Providence.

The causes here referred to were the prevalence of the cholera, and the almost entire loss of the wheat crop of the section of the State connected with the above road. The loss from these alone, are estimated, apparently upon good data, at \$30,000, a sum nearly equal to two per cent. on the capital stock of the company. A large increase to the business of the road for the coming year, from the ordinary sources, is anticipated. In addition to this, the completion of portions of the various roads connecting with the above, must also throw a large business upon it. These roads are the Knightstown road, will be completed 27 miles from Shelbyville, in the spring; the Rushville road 18 miles from the same point; and by the opening of the fall trade, the Bellefontaine road will be completed 26 miles north east of Indianapolis to Pendleton—and the Peru road 20 miles north of the same point to Noblesville; each penetrating a fine agricultural region.

Large additions have been made to the running stock of the road the past year, and it is now fully equipped. In relation to this, and to the general condition of the road we copy the following from the report:

So far as power is concerned, the road may be regarded as fully stocked for two or three years, unless its running distance should be extended. If negotiations now pending, for the running of two roads meeting ours at Indianapolis, should be consummated, we shall want by the first of October

next, two first class freight engines. The cars that may be required are within our own building capacities; and can be put up at much less cost, and in a better manner than elsewhere. We have at present in process of construction two passenger cars, that are required upon our own road.

In the general improvement of the road, for which the stock was last enlarged, very considerable progress has been made during the year. About 24 miles of the track has been relaid with the heavy rail, including something over a mile in the Vernon curves, and the plane, from the foot to the water station, half a mile north of the hill. This work has been executed by Mr. Prindle, and his assistants in an excellent and durable manner. In truth this track is not excelled by any that I have travelled over in the Union. We have now 56 miles of heavy rail, extending to Edinburgh, nearly all of which is in good condition; though portions of the old state track give strong indications of failure.—In addition there has been laid about one mile of switch, or double track, between Columbus and Edinburgh, and the side tracks at Edinburgh, Vernon, and the hill have been extended and much improved.

The track between Edinburgh and Indianapolis is still in fair running condition; though portions of it are yielding to decay, and the passage of heavy trains over it. With about the same expenditure for repairs as last year, it can be well and safely run another season. There are strong reasons, growing out of the embarrassments of the past year, already alluded to, why this should be done, if practicable. It is important that the board, at the present session, should examine and determine this matter.

The above road, under its present efficient management, is a good illustration of what western roads are capable of doing, both for the business of the country, and as yielding a liberal return upon their cost. The success of this work will essentially aid those of a similar character in Indiana in obtaining such assistance as they may require from abroad. They are fortunate in having so successful a work to point to for the purpose of illustrating what may be expected of them when completed.—Several of the unfinished roads of this State have applied to the Madison and Indianapolis for assistance which we have no doubt will be extended to the utmost of its ability. In reference to the future prospect of the road, the President speaks as follows:

Having presented the important business matters that occur to me, I have only to re-affirm what I stated in my last annual report, and have repeated in the present document, that I see nothing in the temporary embarrassments of the past year to weaken my faith in the future productiveness and prosperity of our own work. Its progress thus far has been remarkable. It has built up a sustaining trade within itself; and now wants but a western and northern outlet to increase its revenues and its usefulness even more rapidly than they have been developed in the past. The Terre Haute road may be classed as first in point of usefulness to our own work, and its directors are pressing it forward with great energy, and promise of early success. The grading and bridging of nearly the whole line is under contract; and with the exception of the bridge over White river, at Indianapolis, will be ready for the superstructure and iron during the present season. The Bellefontaine and Peru roads are both ready for the iron; the one 26, the other 20 miles. The branch road to Martinsville has met with great encouragement in the way of subscriptions at home; and the friends of the Columbus, Nashville and Bloomington road are confident they have succeeded in obtaining sufficient reliable stock to prepare their road for the iron. These are all important works to our own; as are the Knights-town and Rushville, whose success is now past doubt. They must largely increase our trade, and under ordinary circumstances, must rather tax our capacity for business, than leave us to linger in want of it.

The following is a list of the officers of the company:

Directors:
John Brough, *President*.
Harvey Bates, Indianapolis.
Thomas A. Morris, " "
James M. Ray, " "
James Whitcomb, " "
Samuel Moore, Mooresville.
Z. Tannehill, Herod, Bartholomew Co.
J. F. D. Lanier, Madison.
Jesse D. Bright, " "
Michael G. Bright, " "
Jos. G. Marshall, " "
William M. Dunn, " "
R. H. Winslow, New York.

Secretary:
WILLIAM N. JACKSON.

Treasurer:
SIMEON S. GILLET.

Superintendent of Road:

MERWIN PRINDLE.

Master Machinist:

JOHN O. D. LILLEY.

Superintendent of Trains:

BENJAMIN MCKEEHAM.

Ohio. Cleveland and Pittsburgh Railroad.

We find in the True Democrat the following account of the present state of this important work. The writer after referring to the fears expressed that a work of such great magnitude could not be completed by Messrs. Chamberlain & Co. within the time stipulated in their contract, goes on to say—

My confidence has been much strengthened by passing along the line, and observing the progress making on the heavy sections. The work at Tinker's Creek is one of these points, and I was gratified to find that the heavy earth work was in such a state of forwardness that its early completion may be regarded as placed beyond a doubt. The bridge at this point is the longest on the line, and may be completed without difficulty, as I have no doubt it will be, by the enterprising contractors.

The next point is Deer Creek, in Lima, Stark county. At this point is the heaviest embankment on the line, measuring some five hundred feet, and averaging near fifty feet in height. It has been in contemplation to put up a wooden superstructure for a portion of the distance. It has now been decided to put in a culvert, and make an embankment the whole distance. Twelve ears and as many carts are at work, and the force will be increased, to complete this heavy work in season for the superstructure.

The next point is the Mahoning Summit. Here the cutting is not deep, but will require time for its completion. A heavy force has been at work all winter, and this point, too, is in such a state of forwardness that no fears are entertained but that it will also be in readiness. From this point to the mouth of Hoane's Run, there is a gradual descent of from three to ten feet. The work is all light, and can be completed in ninety days. This is a beautiful valley. For most of the distance, the hills—which are not high—recede so far from each other as to leave a wide belt of interval lands, of the very best quality. Add to this the directness of the valley, and it really presents some of the most charming scenery through which I have ever passed.

The inquirer, when examining the map of the line, has often asked why the bend near the mouth of this run? The answer is, to pass up this beautiful valley, furnishing ten miles of the cheapest line in Ohio, and avoiding one summit, and heavy grades; and, although the distance is increased near two miles, yet the running time will be less.

At the point where this run empties into the Sandy, about seventy miles from your city, is the distance to which the road will be completed by the first of November next. From this point to Wellsville, about twenty-eight miles, it is proposed to run a line of coaches until the other portion of the line is completed, which will be about midsummer of 1851.

This will enable the traveller to make his trip from your city to Pittsburgh in from thirteen to fourteen hours, and with much more comfort than by the present mode of conveyance.

A steamboat is to be built for the express purpose of carrying passengers from Wellsville to Pittsburgh in the shortest possible time; and the boat will be fitted up, and have accommodations equal to any boat upon the river.

It is often remarked—"Your road ought to strike the river at some more important point." I know of no point between Pittsburgh and Portsmouth that transacts as much business, or receives and ships as much property, as Wellsville. On our route from N. Lisbon to Wellsville, we are really annoyed by meeting and passing so many teams. Persons can have no adequate idea of the business of the place until they spend some time there, or have occasion to traverse some of the roads leading to it.

The estimate of the business of Wellsville, as stated in Professor Twining's report, will surprise many; yet those most familiar with the receipts, think the estimate too low:

"At Wellsville alone, the amount received from the interior in wagons, and returned to it from the Ohio river, is ascertained to be about seventy-five tons a day each way."

Beaver receives from the two canals, and ships upon boats passing up and down the Ohio—yet Beaver receives a very inconsiderable aggregate of produce from wagons, compared the receipts at Wellsville.

From Wellsville, we passed up the Ohio, upon one of those splendid river palaces. The day was as mellow as a May morning, which enabled us to make a minute examination of the route proposed for continuing the road to Pittsburgh, from Wellsville to Beaver. About one-third of the distance, the line would run upon side hill, which has a gradual slope, and will be very easy of construction. The remainder of the distance will be located upon the second table of land, enabling the engineer to choose his grade, and in every instance to keep it above the great freshet of 1832.

Save the Little Beaver, there are no streams of importance. This, with an occasional small run, is all the barrier that nature presents. The expense of grading and bridging will not be much above the average of that of the residue of the line—and there need not be any grade of over five feet to the mile. From Beaver to Pittsburgh the expense will be increased, yet even that will be much lessened by changing the travelled road to the top of the hill, as I understand they contemplate doing, at least where "the narrows" occur.

The above road will connect Lake Erie and the Ohio river by the shortest possible route; and as the connecting link between our great inland seas and the Ohio, it must immediately take rank among our most important railroads in the country. In addition to this advantage of position, it must form one of the links of the main trunk lines of the railroads running from Philadelphia and Baltimore to Lake Erie. As soon as the Baltimore and Ohio railroad reaches Wheeling, connection will be immediately formed with the above road at Wellsville; the Ohio and Pennsylvania intersect it higher up, using, however, a large portion of it. It traverses too one of the longest settled, richest and most fertile parts of Ohio.

South Carolina.
South Carolina Railroad.—At an election held in Charleston on the 13th inst., the following gentlemen were elected President and Directors of the South Carolina railroad company.

President: HENRY W. COMMER.
Directors:
Wade Hampton, Ker Boyce,
H. Gourdin, John Bryce,
F. H. Elmore, W. B. Pringle,
W. C. Duke, R. Caldwell,
G. A. Trenholm, Andrew Wallace,
Alfred Huger, C. J. Shannon,
Robert Martin, L. J. Patterson.

South Western Railroad Bank.—The following is the result of an election held on the same day, for President and directors of the above institution for the ensuing year:

President:

JAMES ROSE.

Directors:

M. C. Mordecai, William Patton,
James Legare, O. B. Hilliard,
C. A. Magwood, G. B. Locke,
W. J. Grayson, W. C. Gatewood,
I. S. Cohen, H. W. Peronneau,
Geo. A. Hopley, P. J. Porcher.

We quote what follows from the proceedings, as exhibiting the financial condition of the affairs of the road:

John Ravenel, Esq., Chairman of the committee of the sinking fund, presented a report accompanied by the following resolutions:

1. Resolved, That it be referred to the directors to call upon the stockholders for payment of the balance of \$25, due on the shares of the capital stock, by instalments; provided, however, that the instalments shall not exceed \$5 each, nor be required at shorter intervals than ninety days.

2. Resolved, That on the completion of the works contemplated in the estimate submitted with this report, all expenditures thereafter to be incurred for the construction and repair of depots, the keeping up of the roads, the purchase and repairs of locomotives, cars and machinery, shall be charged to expenses, in like manner as the expenses of working the road.

The following summary embraces the conclusions at which the committee have arrived:

Assuming that the instalments due upon the shares will have been paid, the debt of the company, which we have supposed would amount, at the completion of the improvements, with our present means to \$3,667,000
Will have been reduced about 550,000

Leaving a balance of debt, of \$3,117,000
And the 38,810 shares of stock at \$100
would be 3,881,000

Making the capital \$6,998,000

Or in round numbers \$7,000,000. In this estimate of capital we have excluded the \$448,000 of income and the \$311,000 of forfeitures, expended on the road; and also our proportion of the Camden branch. It represents the capital upon which interest is paid or dividends expected.

We have already seen that the average annual increase of the receipts of the road have amounted to nearly \$75,000. The last year's increase was \$92,070. We may, therefore, safely estimate the Gross income of 1851, at \$1,075,000
60 per cent. of which, for all expenses
as already explained, would be 642,000

And will leave a net profit of \$433,000
being a fraction over 6 per cent per annum, on the estimated capital.

But \$2,000,000 of our debt bears an interest of only five per cent. If, therefore, the interest of the debt be first charged, and the balance of net profit be divided on 38,810 shares, it would amount to 6 7/10 per cent. before regard is had to the interest of the debt.

Emigration.

An abstract of the Parliamentary returns shows that the number of emigrants from the United Kingdom in 1846 was 159,851, of whom 87,611 were from England, 3,427 from Scotland and 38,813 from Ireland. Of these 52,239 went to the United States, 43,439 to the North American Colonies, 488 to the British West Indies, 2,377 to the Australian Colonies, and the remainder to various places, foreign and British.

In 1847, the total number of emigrants was 258,270, of whom 153,898 were from England, 8,616 from Scotland, and 95,736 from Ireland. Of these 142,154 went to the United States, 109,680 to the North American Colonies, 364 to the British West Indies, 4,949 to the Australian Colonies, and the remainder to various other places.

In 1848, the total number of emigrants was 248,

of whom 176,883 were from England, 11,595 from Scotland, and 59,701 from Ireland. Of these 186,233 went to the United States, 31,065 to the North American Colonies, 855 to the British West Indies, 23,622 to the Australian Colonies, 1,180 to the East Indies, 1,445 to the Cape of Good Hope, and the remainder to various places in very small numbers.

The Journal of Commerce gives, from an authentic source, the annexed statement, showing the number of vessels and passengers which have arrived at the port of New York from foreign countries during the past 15 years:

Year.	No. of arrivals.	No. of passengers.
1835	2,094	35,303
1836	2,291	60,541
1837	2,071	57,975
1838	1,790	25,581
1839	2,159	48,152
1840	1,953	62,797
1841	2,118	57,337
1842	1,960	74,949
1843	1,832	46,302
1844	2,208	61,002
1845	2,044	82,960
1846	2,293	115,230
1847	3,147	166,110
1848	3,060	191,909
1849	3,227	221,799

The number of passengers arrived during the past year is unprecedented, exceeding by 29,890 the extraordinary number in 1848, nearly double the immigration of 1847, and nearly treble that of any previous year. Judging from the number arrived at New York, (221,799) we should infer that the number arriving in the whole United States by sea, including California, must be 325,000 to 350,000; in addition to which, many thousands have entered our territory from Canada.

Pennsylvania.

Report of the Board of Canal Commissioners.—The Board of Canal Commissioners have submitted a report of the operations on the several lines of canal and railroad of the Commonwealth, for the year ending the 30th of November, 1849, from which we extract the following exhibit of receipts and expenditures:

	RECEIPTS.	EXPEND.
Phila. & Col. R. R.	\$582,750	37 \$291,855
Alleghany Portage.	220,466	56 222,668
Main line of Canal.	443,324	58 152,908
Delaware Division.	196,714	25 32,518
Susqueh'a & N. W. branch.	190,501	43 55,554
Deduct drawbacks.	279	46
Total receipts.	\$1,638,277	72 \$758,500
Net receipts over expenses.		87 \$8,74,776

The report is quite lengthy, interesting and important, showing that the improvements of the State promise much good to the public in future, as well as greatly increased revenue to the State.

Georgia.

South Western Railroad.—The following named gentlemen were chosen directors of the South Western railroad company for the ensuing year, at the late meeting of the stockholders in Macon:

L. O. REYNOLDS, President.
R. R. CUTLER, Director.
J. W. ANDERSON, Director.
Wm. A. BLACK, Director.
David Kiddo, Director.
A. H. CHAPPELL, Director.

At the same meeting the second annual report of the directors was presented, from which we learn that the progress and condition of the work are most satisfactory. Thirty-seven and a half miles of the grading have been completed, leaving only 12½ miles more to be done, and the superstructure has been commenced. We quote the following from the report:

"The total amount received, is \$432,806 10, and the amount expended \$321,268 06, leaving a balance in the treasury of \$111,538 04."

Included in the amount set down as expended, is the sum of \$56,551 84, which is credited to the contractors on their stock, and which is to remain in the hands of the company until the completion of their respective contracts.

By the statement of the Chief Engineer, also appended, you will learn that there has been done 1,428,816 cubic yards of excavation and embankment, and that there remains to be done, 450,869 cubic yards, being less than one quarter of the whole amount—in other words, there has been equal to about thirty-seven and a half miles graded, leaving about twelve and a half miles to be graded, to reach the depot on the western side of the Flint river. A large quantity of timber has been procured for the superstructure, and the laying is about to be commenced. Three thousand one hundred tons of iron rails, with the necessary connecting plates, have been purchased on very favorable terms, and a large portion of it delivered in Savannah. The quantity of iron is amply sufficient to iron the track to the point above mentioned, west of Flint river, fifty miles."

The report concludes as follows:

"The true policy of the company is therefore believed to be, to avoid encumbering itself with debt. We shall, however, be obliged to avail ourselves of the liberality of the Central railroad company, to a limited extent, in affording us the aid of its credit, to enable us to procure the necessary engines, cars and other machinery, to put the road in operation. It is proposed to make contracts immediately for these things."

Savannah and Augusta Railroad.—It is with sincere gratification that we announce that the contracts for constructing the Augusta Branch Railroad as far as Waynesboro' have been completed. The whole work, superstructure and all (the iron being already on hand,) is to be done in season for the trains to pass over by the 15th November next! The energy and character of the contractors, Dr. Collins and Messrs. J. D. Gray & Co., (the latter from the State Road,) are a good guaranty for the speedy execution of the work.—Dr. Collins has taken the first six miles, starting from the seventy-eight mile station, and Messrs Gray & Co. the remainder. The terms are generally favorable to the company, varying, for excavation and embankment, from 10 to 15 cents per cubic yard. Within five days from this time the hands will be at work on the grading. The contracts were signed in this city yesterday.—*Savv. Rep., 17th.*

COMPARATIVE STATEMENT

Showing the Tonnage of Vessels of every description in the United States and Great Britain:

Great Britain.

Dec. 31, 1847.

No.	Tonnage.
23,167	3,168,913
1,033	141,006

3,309,919

United States.

June 30, 1848. 3,154,041

Comparative statement showing the shipping built in 1848:

Great Britain.

No. Tonnage.

733	107,218
114	15,334

122,552

United States.

No. Tonnage.

1,876	318,078
175	

1,851

The difference in the measurement of English and American vessels, does not permit us to make the comparison exact. Under their present regulations, English vessels are measured in detail,

showing the actual tonnage of each. The rule adopted in this country for Custom House measurement, by which the register is determined, is this—*one-half the breadth of beam is assumed as the depth of the hold.* This rule is purely arbitrary. The actual tonnage is greater or less, than Custom House measurement, according to the particular build of each vessel. A full ship, with a greater depth of hold than one-half the breadth of beam, exceeds in actual tonnage the amount stated in its register. A majority of American vessels that go to Liverpool, and are there measured, are found to exceed in tonnage from 10 to 20 per cent. the nominal amount given in their register.

Massachusetts.

Western Railroad.—The annual report of the directors of the Western railroad shows that its receipts for the year ending November 30th, 1849, were as follows:

From passengers.....	\$561,575 25
freight.....	745,393 81
other sources.....	36,841 51
<hr/>	

The expenditures were—

For road repairs.....	\$125,570 53
engine repairs.....	47,554 60
freight and passenger car repairs.....	57,998 13
buildings, etc.....	18,713 62
transportation exp.....	303,843 26
general expenses.....	34,642 44
<hr/>	
	588,322 58

Net earnings for the year \$755,487 99

The gross receipts of 1849 were \$12,000 more than in 1848, and the expenses \$64,000 less. The receipts from passengers were \$10,530 more than in 1848; from mails \$1,721 more; and from merchandise \$516 less.

The whole cost of the road has been \$9,926,951 78, as follows :

Graduation, masonry and bridging ..	\$4,588,003 36
Superstructure.....	1,859,035 64
Station buildings.....	632,827 48
Land damages.....	501,782 39
Locomotives.....	362,000 00
Cars.....	560,587 43
Engineering and other expenses.....	1,422,714 78
<hr/>	

\$9,926,951 78

This cost has been provided for as follows : Capital stock..... \$5,150,000 00 Sterling bonds at 5 per cent..... 4,319,520 00 Albany bonds, 6 per cent..... 1,000,000 00

\$10,469,520 00

There has been paid into the sinking funds the sum of \$459,578 62; and there is a balance of construction funds unexpended of \$82,989 60.

The number of through passengers in 1849 was 33,751, and of way passengers 402,053. The quantity of freight in 1849 was 81,728 going west, and 191,880 going east—being 673,608 tons moved: equivalent to 162,289 over the whole road. The number of barrels of flour conveyed was 590,165.

Pennsylvania.

Pittsburgh and Erie Railroad Company.—At an election held on the 11th inst., at the Reed House, Erie, the following named gentlemen were elected directed:—Charles M. Reed, M. Courtwright, William Kelley, James Williams, A. W. Brewster, D. Mc Allister, C. McSparren, James C. Marshall, John A. Tracy, P. Metcal, John McClure, Jr., B. B. Vincent, Smith Jackson.

At a meeting of directors, subsequently held, C. M. Reed was elected President, and D. McAllister appointed Secretary and Treasurer.

We understand the prospects of this road are

very flattering. It has been taken hold of by men who, if we have not greatly mistaken their resources and character, will build the road within from three to five years. A portion of it will most likely be finished next year, or by the time our Western road is completed to the state line.

Exports of British Iron in 1848 & 1849.

The Parliamentary Returns, ending on the 5th of January of the years 1848 and 1849, show the exports of Iron for those years from the British Isles:

	1848.	1849.
	Tons.	Tons.
Pig iron.....	176,086	175,650
Bar iron.....	214,874	321,134
Bolt and rod iron.....	13,419	17,553
Cast iron.....	26,321	19,371
Iron wire.....	1,972	1,912
Wright iron anchors, grapnels, &c.	4,561	4,625
hoops.....	17,163	16,644
nails.....	5,735	5,709
others', exc't ord'nce	74,036	49,384
Old iron for re-manufacture.....	5,571	7,241
Unwrought steel.....	9,786	6,912

Tennessee.

East Tennessee and Georgia Railroad.—The legislature has authorised the Governor to issue six per cent coupon bonds of the state to the amount of \$350,000, to aid in the purchase of iron and equipments necessary for the East Tennessee and Georgia railroad. The part of this road from Dalton to the Tennessee river, when completed, will cost a million and a half dollars. The interest of the state in it is \$426,500.—*Nashville Union*, February 2.

Statistics of the State of Michigan.

The following statistics of Michigan, we extract from Gen. Barry's message: The Secretary of State, in due time, will present you his report prepared in accordance with that provision of "An Act to provide for statistical information," approved April 3d, 1842. From this report much valuable statistical information may be obtained. The land under cultivation in the state in 1848, was 1,437,000 acres, of which 465,000 acres were sowed with wheat. The quantity of wheat raised was 4,739,390 bushels, and of all other grains 8,179,797 bushels; wool produced, 1,645,756 lbs; sugar made, 1,774,369 lbs.; in the State, 52,305 horses; 210,368 neat cattle; 152,541 swine; 649,534 sheep; 226 flouring mills; 568 run of stone; 719,478 barrels of flour made; 593 hands employed; \$1,496,400 capital invested; 730 saw mills, 157,179,257 feet of timber sawed; 1,959 hands employed, \$939,470 capital invested; and \$4,660,974 in merchandise imported, exclusive of Detroit. The Secretary of State supposes the reported amount invested in flouring and saw mills to be too small, but the report otherwise to be essentially correct. The returns also show in the State 18 deaf, 10 dumb, 71 deaf and dumb, 71 blind, and 120 insane.

Indiana.

We are informed that the Bellefontaine and Indianapolis railroad will be put under contract this spring, and that enough stock to justify it has been subscribed. This road commences where the Pittsburgh crosses the Cleveland and Columbus road—passing thence through Morrow, Bellefontaine and Sidney, to the Indiana State line. We also learn that the railroad from Martinsville

to Franklin, and by extended connection with the Madison road, a few miles north of Edinburgh, has been nearly all put under contract; contractors taking 40 per cent. of the amount of the engineer's estimate in stock. The remainder will be taken up in the spring. This road is to be done by September, 1851.

Ohio.

The Columbus and Xenia railroad was open for travel on the 1st inst.

Connecticut.

New Haven and New London Railroad.—The New Haven Register states that a large meeting of the friends of a railroad from that city to New London, was held in New Haven on Wednesday. Contractors from different parts of the country submitted proposals for the immediate construction of the road, and the work is to be taken seriously in hand.

New Hampshire.

Concord Railroad.—At a meeting of the stockholders of the Cocheco railroad, held at the Town House, in Dover, Wednesday, Jan. 2d, the following directors were chosen: Wm. Hale, Geo. Mathewson, Joseph H. Smith and Thomas H. Cushing, Dover; Edward Crane and Stephen S. Stone, Boston; and John Barker, Farmington.—*Dover Gazette*.

Cocheco and Claremont Railroad.—About three-fourths of the grading, masonry and bridging between Warner and Bradford, has been completed, and the residue will be finished, ready for the track by the first day of May next.

DEATH OF SIR I. E. BRUNEL.

We have this month to record the death of this, in many respects, extraordinary man, best known by his great work, the Thames Tunnel. The Times has a short memoir of him, which we reprint as being a concise history of his origin and career:—"Sir Ishambert Brunel was by birth a Frenchman; but his life and genius were almost wholly devoted to the invention and construction of works of great public utility in this country. He was born at Hacqueville, in Normandy, now in the Department de l'Eure, in the year 1769. He was educated for the church, with the prospect of succeeding to a living, and was accordingly sent at an early age to the seminary of St. Nicain, at Rouen. But he soon evinced so strong a predilection for the physical sciences, and so great a genius for mathematics, that the superiors of the establishment recommended he should be educated for some other profession. Accordingly, at the proper age, he entered the royal navy, made several voyages to the West Indies, and returned home in 1792. At this time the French Revolution was at its height, and as Mr. Brunel entertained royalist opinions, he emigrated to the United States, where necessity, fortunately, compelled him to follow the natural bent of his mind, and to adopt the profession of a civil engineer. He was first engaged to survey a large tract of land near Lake Erie. He was employed in building the Bowery Theatre in New York, which not many years ago was burnt down. He furnished plans for canals, and for various machines connected with a cannon foundry then being established in the state of New York. About the year 1799, he had matured his plans for making ship blocks by machinery. The United States was not then the field for so inventive a genius as Brunel's. He determined upon visiting England, and offering his services and plans for this purpose to the British Government. Lord Spencer, then, we believe, First Lord of the Admiralty, became his friend and patron. From this time he continued to reside in England, and refused to entertain many propositions made to him to leave this country and settle abroad under auspices of other governments. After much opposition to his plans, he was employed to execute them in Plymouth Dockyard. To perfect his design, and to erect the machinery

was the arduous labor of many years. With a true discrimination, he selected Mr. Henry Maudslay to assist in the execution of the work; and thus was laid the foundation of one of the most extensive engineering establishments in the kingdom, and in which, perhaps, a degree of science and skill had combined and applied to mechanical invention and improvement scarcely exceeded by any other in the world. The block machinery was finished in 1806; and has continued ever since in full operation, supplying our fleet with blocks of good description to those previously in use, and at a large annual saving to the public. A few years afterwards he was employed by government to erect sawmills, upon a new principle, in the docks yards of Chatham and Woolwich. Several other inventions were the offspring of his singularly fertile mind about this time; the circular saws for cutting veneers of valuable woods, and the beautiful little machine for winding cotton thread into balls, which greatly extended its consumption. About two years before the termination of the war, Mr. Brunel, under the countenance of the Duke of York, invented a machine for making shoes for the army by machinery, the value and cheapness of which were fully appreciated, and it was extensively used—but the peace of 1815 lessened the demand, the machinery was ultimately laid aside. Steam navigation, also, at that time attracted his attention. He was engaged in building one of the first Ramsgate steamboat, and, we believe, introduced the principle of the double engine for the purpose. He also induced the Admiralty to allow him to build a vessel to try the experiment of towing ships out to sea, the possibility of which was then denied. The visit of the Emperor Alexander to this country after the peace led him to submit to the emperor a plan for making a tunnel under the Neva, where the accumulation of ice, and the suddenness with which it breaks up on the termination of winter, rendered the erection of a bridge a work of great difficulty. This was the origin of his plan for a tunnel under the Thames, which had been twice before attempted without success.

AMERICAN RAILROAD JOURNAL.

Saturday, March 2, 1850.

The Railroad Journal.

The American Railroad Journal was the earliest work published in any part of the world devoted to the railway interest. In its pages is to be found the only full and complete history of railway progress, the only authentic record of the discoveries and improvements which the greatest of practical science has drawn forth and perfected.

The means of enhancing its value under its present proprietorship are far greater than when we assumed its charge about one year ago. It will continue to furnish the best practical results as to the construction and working of railroads, the details of progress in steam navigation, commerce, mining, manufactures, banking and the mechanic arts.

The best practical talent that can be enlisted in the country is engaged to supply its pages. The mining interest will find evidence of the first systematic attempt to give a full view of the iron, copper and lead ores of the country, with the results of practical working. In all the branches of mechanical industry we seek to discard the crude conceits of unskilled pretension, the thousand useless novelties issuing from the Patent Office, and to give encouragement to whatever can be made useful in relieving the wants, in ministering to the pleasures, or contributing to the advancement of the race.

We invite contributions to its pages from all who sympathise in our labors, information in any form from those most interested in the progress of mechanical invention, and substantial support from all who are willing to aid us in the arduous duties of our position.

Condition of Railway Property.

The elaborate and carefully written article in last week's paper from the Companion to the British Almanac for 1850, must have attracted the attention of the readers of the Journal. It is a source of regret that, in this country, information necessary to a similar review of the condition of railway property, should be still so incomplete and defective.

We have more than once urged upon the attention of the Legislatures of the different States, the importance of a law requiring returns from the several companies, similar to those made by the English railroads. The returns of New York roads for the past year are an improvement upon those of former dates.

The returns of the Massachusetts roads, soon to be published, will contain more specific information than those of previous years.

The Massachusetts law is defective, in not requiring a statement showing the cost of transporting passengers and the cost of transporting freight. Until this information is given, the means of applying the proper remedies to the correction of errors in the management of railways cannot be obtained from the reports of the respective companies.

The Massachusetts railroads, and in fact nearly all the New England roads which connect with Boston, and are known as the Boston roads, are at the present time in a comparatively depressed condition.

The following table shows the comparative prices of the leading railroad stocks in Boston within about two years:

	Mar. 31. 1848.	Mar. 31. 1849.	Mar. 1. 1850.
Boston and Lowell.	114 $\frac{1}{2}$	112	115
Boston and Maine.	117 $\frac{1}{2}$	103 $\frac{1}{2}$	103 $\frac{1}{2}$
Boston and Worcester.	117	105 $\frac{1}{2}$	94
Boston and Providence.	100	89	86
Fitchburgh.	117 $\frac{1}{2}$	109	107 $\frac{1}{2}$
Western.	104	100 $\frac{1}{2}$	102 $\frac{1}{2}$
Eastern.	106	99 $\frac{1}{2}$	95
Vermont Central.	76	53 $\frac{1}{2}$	43 $\frac{1}{2}$
Northern, (N. H.)	97	80 $\frac{1}{2}$	65
Old Colony.	96	80 $\frac{1}{2}$	66
Cheshire.	84	72	55
Passumpsic.	98	85	68
Norfolk Co.	100	57 $\frac{1}{2}$	28
Vermont and Mass.	74	45 $\frac{1}{2}$	27

This presents an extraordinary decline of prices, which is without parallel in the history of New England enterprise.

The cause of this decline can be stated in very few words—an over-supply of railway lines. There is no doubt that commercial embarrassment in Boston has been produced by an over-investment in railways, and this embarrassment has acted with extraordinary force upon the value of railway shares. Still, all sound, dividend, six per cent. paying railroad stocks continue to maintain in Boston market their position with the ordinary securities of the day.

There is no longer any question on the minds of any one that Boston has put too much money into railroads as a mode of investment, or for motives of speculation. Her importance has been thereby increased, and her business has been enlarged by the construction of her wonderful net work of railways. The real misfortune has been the speculative movements with a view to invite the investment of money in railways, from capitalists. The present reaction is a necessary consequence resulting from this condition of things. In New York the operations in railway shares at the stock exchange has exhibited no such extraordinary results.

A large majority of the railway stocks have maintained a comparatively uniform price. The Utica and Schenectady railroad stock has advanced from 120 to 125 during the past year, and the Syracuse and Utica from 120 to 130. The New York and New Haven from 90 to 97 $\frac{1}{2}$.

Without extending these remarks further, they will furnish suggestions to those engaged in railway schemes, and admonish them not to multiply railway lines with a view to investment of capital beyond the ability of the community to construct them, without embarrassment to ordinary business, or beyond the capacity of the road ultimately to earn a fair dividend upon their cost.

Mr. Detmold requests us to make the following corrections in his communication, which appeared in our paper of the 9th ult.:

In the 4th line of the second column, for "concocting" read concerting.

In the 39th line same column, "for assurances" read assurance.

In the 2d page, 2d column, in the 47th line, read phosphate instead of "phosporate."

In 15th line from the bottom of last column, read Vanquelin for "Vanguelin."

In the 27th line from the bottom of the 3d column, read "that it is" instead of "this is."

In relation to appending his name as the writer of the review of Mr. Overman's work, which was done by us, we insert the following from Mr. D.'s letter.

"In conclusion, I must express my decided regret at seeing my name placed in the table of contents at the head of your Journal, as the author of the review of Overman. This is certainly as much against my wishes and expectations as it is contrary to editorial usage. Reviews and critiques are invariably anonymous; and in disregarding this wholesome custom in this instance, you expose me to the unjust suspicion of challenging a personal discussion with the author, which is certainly the last thing I should desire.

I am very resp'y yours,

C. E. DETMOLD."

St. Lawrence and Atlantic Railway.

A. T. Galt, Esq., Commissioner of the British American Land Company, and late Member of Parliament for Sherbrooke county, has been unanimously chosen President of the St. Lawrence and Atlantic railway, in room of Hon. A. N. Morin, resigned. Mr. Morin is Speaker of the Assembly, and the removal of the seat of government from Montreal to Toronto prevented Mr. Morin from retaining the situation of President of the railway, and Mr. Galt gave up his place in Parliament on account of the change of the seat of government.

John Young, Esq., of Montreal, was elected Vice-President of the company, and C. A. Webster, Esq., of Montreal, has been appointed Secretary and Treasurer. Under the guidance of its present able executive its whole line has been placed under contract, and under the same guidance its successful completion is no longer a matter of question or doubt.

Powerful Locomotive.

A correspondent writes to us from Cambridge, that Mr. Kirk has turned out from his establishment his second railroad engine, which mechanics declare to exceed anything of the kind in the country, and which, in its construction and finish, will take the place of all others in its advantages over common locomotives. It was built for the broad gauge of the Androscoggin and Kennebec railroad, to draw passengers, weighs 21 tons, its wheels are 6 ft. 6 in. and its engine 10 ft. 6 in. long, and its boiler 6 ft. 6 in. high, and its firebox 4 ft. 6 in. wide.

5 feet 6 inches in diameter, cylinder 16 inches in diameter and 20 inches in stroke. The tender is capable of containing 1800 gallons of water, and the locomotive is warranted to draw the passenger train at the rate of 50 miles an hour. Our correspondent pays a high compliment to Mr. Kirk for the strength and finish of his machines for annihilating time and space, and states that he has in process of construction a locomotive for the Reading railroad, which, when finished, will be worthy of the examination of mechanics.—*Boston Courier.*

English Stocks—Consols.

On the 5th of January, 1846, the national funded debt of the United Kingdom of Great Britain and Ireland was £768,789,241 sterling, or 3,741,450,742 dollars. The revenue for the same year (regarded as the most prosperous—at any rate known to have been the year most renowned for the abundance of money for a whole century) was £53,060,353 sterling; the expenditure £49,242,713, leaving a surplus of income beyond expenditure of £3,817,640. The revenue for the year ending Jan.

5, 1847, was.....	£53,790,138
The expenditure for the year ending Jan. 5, 1847, was.....	50,943,830
The revenue for the year ending Jan. 5, 1848, was.....	51,546,265
The expenditure for the year ending Jan. 5, 1848, was.....	54,512,539
Showing an excess of expenditure above income of.....	2,956,265
The revenue for the year ending Jan. 5, 1849, was.....	53,388,717
The expenditure for the year ending Jan. 5, 1849, was.....	54,185,136
Showing an excess of expenditure above income of.....	796,419

The funded debt of the United Kingdom on the 5th of January, 1849, had reached the sum of £774,022,638 sterling, or £1,690,098 more than it was in 1829, or 20 years before. The unfunded debt was £17,794,700, making the national debt £791,817,338 sterling.

The public funds of Great Britain are now regarded as the commercial and financial barometer of the condition of trade. They are affected at once by political agitations or great commercial movements in any part of the world.

In looking at the foreign news, the first inquiry usually is, as to the price of consols. *Consols* is an abbreviated expression for the consolidated funds of the British government. Formerly, different loans were charged to a particular fund, as the *Aggregate Fund—South Sea Fund*, etc. Finally, in 1786 all these funds were by law united into the Consolidated Fund, during the administration of Pitt, the younger—bearing interest at the rate of 3 per cent., and the 3 per cent. Consolidated Funds thereafter took the name of *consols*.

The fluctuations in these funds indicate the state of the money market throughout Europe. In 1737 and 1739 the price of 3 per cents reached £107 for the £100; this was the highest price they have ever reached. They fell to 76 during the rebellion in 1745, but rose again to 100 in 1749. They did not reach *par* again till 1844, or nearly a whole century. Towards the close of our Revolutionary war, they fell to 54, and rose to 96 in 1792. In 1797 they fell to the lowest point ever known, 47, in consequence of the success of the French in every direction, the general distress in England, and the alarm occasioned by the mutiny at the Nore. On the conclusion of the peace of Amiens in 1802 they rose to 79, but sunk to 50 on the breaking out

of the war in 1803. In 1806 they reached 66, in 1808 they rose to 70, and in 1810 to 72. The war with this country brought them down to 55 in 1812. They rose to 73 on the abdication of Napoleon in 1814, and fell to 55 again on his escaping from Elba. They rose again after the battle of Waterloo, and in 1817 were at 84. The trial of the Queen in 1820 caused them to fall to 65, but in 1824 they reached 97. They fell again to 74 in the panic of 1825, and again advanced gradually till they reached 91½ in 1830, but fell to 77½ in 1831. From 1831 to 1844 there was a steady advance with slight variations, when they reached 100½ in October, and 100½ in December, 1844.

Several times in 1845 they stood at par, though they receded to 96½ in October, and to 93½ at the close of 1845. In 1846 they reached 97½. In 1847 they declined to 77, but reached to 86 in December of that year. They had reached 89½ in Jan. 1848, but fell to 81½ on the breaking out of the French Revolution in February of that year. They reached 89½ in December, 1848, and rose to 93½ in September, 1849. By the most recent arrival, the America, the price of Consols had reached 96½ on the 1st day of February last.

Pacific Railroad.

The St. Louis Review, in a long article upon the subject of the Pacific railroad, estimates the cost of the work to Jefferson city at \$25,000 per mile, and from thence to the boundary at \$20,000 per mile; a liberal estimate, but not too high probably, for the class of road that should be constructed to accommodate the enormous amount of business it would be called upon to perform, and to make it a suitable link of the great line to the Pacific. In relation to route, etc., the Review says:

"The structure of the country, as well as the mineral resources in our neighborhood, concur in indicating a line for this railway, which will diverge far enough south of a due west course to penetrate the valley of the Merremac river, and follow it a sufficient distance to afford easy and cheap access to it by means of branches or otherwise, and pass from thence on the most practicable and direct course to the mouth of the Kansas river. It is a moderate estimate to state, that along this line there are at present distributed two hundred thousand people, whose whole import and export trade must be carried on by means of this road for five months of the year, and at least one hundred thousand whose trade will be conducted upon it throughout the year. During the past season three hundred and fifty five steamboats either ascended or descended the Missouri river. With a railway, it is a moderate calculation to say, that two-thirds of their tonnage would find a market upon it, because the greater part of the hemp and tobacco would seek one during the winter months. One hundred thousand tons is a low number to count as at present ascending and descending the river.—The average distance which this freight would be carried would probably be about one hundred and fifty miles. At the usual rate of four cents per ton per mile, this would yield a revenue of \$600,000. The number of passengers during the year, independent of the augmentation produced by the California fever, is probably twenty thousand. If we add to this number the increase already known, this number will be swelled to about thirty thousand. These, at the rate of \$7 to the border, (a low price) would yield \$210,000. Total income upon present population, produce and passengers, \$810,000.—

The history of railway improvements justifies us in the conclusion, that all these sources of revenue

would be quadrupled before the railway can be completed. If this be true, the first annual income of the road would be \$3,240,000. Suppose that one half this revenue is consumed in repairs and expenses, and we have left \$1,620,000. And is there any one who does not know that the value of all the lands, the products of which would find a market upon this railway, would be more than quadrupled by its construction? And is it not obvious that the main reason of its increase of value would be because of the greater quantity brought into cultivation, the more skilful cultivation, and the consequent augmentation of production?

In the foregoing remarks we have said nothing of the vast mineral treasures, which can only be brought into market through the instrumentality of a railway. It is believed by the best judges that there is a large amount of iron, ore of copper, and of bituminous and carbuncle coal embosomed in what is called the mineral region of Missouri than can be found within the same space in any other portion of the globe. With a railroad, capital would instantly seek investment there, and all these ores would be worked with vast profits to the miner, and incalculable advantage to the community. We hesitate not to declare that, in our opinion, the mineral region alone would more than justify the construction of a double track railway of the best class."

Cast Iron Rails.

MESSRS. EDITORS: In your valuable periodical of the 16th inst., is an article upon the subject of cast rails, which I am pleased to see you favor. I have for a long time looked upon it as a "fixed fact," to use a phrase of the day, that cast rails are as certain to be introduced to common use, as it is certain that rails will be used at all. My reasons are, that the cost will be reduced at once about 50 per cent. Next, that when they are adopted, foreign rails will be excluded almost wholly by them, and lastly, if it be true, as alledged, that the lamination of a wrought rail is destroyed by use, and granulation takes place, we might as well use cast iron at once.

It is amazing that there should be so much ignorant respecting the iron manufacture. I do not mean with the public generally, but in the trade itself, and not only in this country, but all over the world. Until recently, iron men as a class, have been almost uniformly wealthy. Yet with the command of vast means among them, scarcely one seemed to apply his wits or his money thoroughly to learn his own business. This business has been pursued all over the civilized and semi-civilized world since the earth was first inhabited, and yet, until recently, the learning and practical sense of those engaged in it have been as stationary, as the practise of medicine since the days of Galen.

Who knows now anything of the art and mystery of mixing ores? This indeed is "the point" to which science and practical good sense should direct its unremitting attention, for upon this question alone depends the adoption of the cast rail. Let it only once be known that the iron master can bring from his stack a pig of any required tenacity and hardness, and your rail mills are silenced forever. Will this be accomplished? Undoubtedly, for there is now more mind and more invention applied to this very subject, than there ever was before, and it will be accomplished. In fact I have not the slightest doubt that the manufacture of iron, if party spirit do not cause the government to play the step-mother with this great interest, will be in a few years so improved, that for one half of the present

tical purposes that we now use wrought iron, cast iron will be substituted.

I observe that you set down the strength of cast iron as one-ninth less than wrought iron, and its expense at one-third less. Haswell fixes cast at 1, and wrought at 1·12, as the proportions. My own impression is, that these estimates are all vague, and that nothing less than a series of well tried and careful experiments made under the direction of government, with iron of the most approved ores, and made in the most approved manner, both with charcoal and anthracite, will throw any light upon this subject. How little reliance is to be placed upon what we do know, may be inferred from the fact, that when the Britannia and Conway tubular bridge was to be constructed, the most scientific and intelligent men knew nothing, absolutely *nothing*, of the proper shape or size of the iron needed, nor of the right mode and manner of putting it together. In fact, they seemed to know none of the simplest principles which were afterwards ascertained by a long series of troublesome and expensive experiments, to govern this material. My object therefore in writing to you is, to attract if possible some attention to the subject, and to ascertain if any experiments have been made, with what degree of care, and their results; and finally, if possible, to induce some able company or the government to go into a series of experiments under competent direction, which shall embrace the whole ground satisfactorily.

There has been some experimenting upon the Philadelphia and Columbia railway, but I should place but slight reliance upon it, as the road is under party direction, and the changes are very frequent, and the appointments not likely to be made for scientific attainments, or those qualities which should be possessed by a person fit to take charge of such experiments. The subject indeed is sufficiently grand in its aspects to induce Congress to make a special appropriation for it, did sensible subjects at all occupy their attention. Hoping you will continue the agitation of this subject, and gather new light upon it,

I remain truly yours, T. C. H.

Wheel, Forge and Foundry Iron.

LOCUST GROVE Wheel Iron of great strength and superior chilling property.

Balt. Charcoal Forge Iron, from Patuxent, Curtis Creek and Gunpowder furnaces.

Elkridge Foundry Iron, of superior strength and softness. Anthracite and Charcoal Iron from Pennsylvania and Virginia. Gas and Water Pipes, Lamp Posts from Elkridge furnace.

LEMMON & GLENN,
6m9 62 Buchanan's Wharf, Baltimore.

Ibbotson, Brothers & Co's CELEBRATED CAST STEEL

AND

Best Cast Steel Royal Improved Files, well known as better adapted for Engineers' and Machinists' purposes than any now in use in the United States.

Every description of Square, Octagon, Flat and Round Cast Steel, Sheet, Shovel and Railway Spring Steel, etc., and Steel to order for any purposes—manufactured at their works in Sheffield—and universally known by the old stamp "Globe."

HENRY J. IBBOTSON, Agent,
218 Pearl st., New York.

February 25, 1850.

CAUTION.

RAILROAD COMPANIES and others are hereby cautioned against using or rendering our improvement for easing the lateral motion as applied on Railroad Cars. Letters Patent having been granted to us in 1841, any party or parties so making or using said improvement without license from us will be proceeded against according to law.

DAVENPORT & BRIDGES.

STABILITY—SECURITY—PERPETUITY. Mutual Life Insurance Co. of New York.

No. 35 WALL STREET.

A MILLION OF DOLLARS

Securely invested in Bonds and Mortgages on real estate in this city and Brooklyn, and stocks of the State and City of New York and United States Government.

This fund is rapidly increasing, by a widely extended and prosperous business.

The company declared a dividend of profits of fifty-two per cent. on all existing policies on the 31st of January, 1848.

All the Profits are Divided Among the Insured.

The premiums are payable in Cash annually, semi-annually, or quarterly, interest being added on the deferred payments.

The cash principle adopted by this company secures to the parties for whose benefit the insurances are effected, the whole of the advantages, without subjecting them to the heavy drawback of accumulated premium notes.

Persons may effect insurance on their own lives and the lives of others.

A married woman can insure the life of her husband, the benefits of which are secured by law for the exclusive use of herself or children.

Clergymen and all others dependent upon salaries or their daily earnings are specially invited to avail themselves of a resource whereby their surviving families may be secured from the evils of penury.

Pamphlets explanatory of the principles of Mutual Life Insurance, and illustrating its advantages, with forms of application, may be obtained at the office of the company, 35 Wall street, or of any of its agents.

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JOSEPH B. COLLINS, President.
ISAAC ABBATT, Secretary. 3m9

WHISTLER MONUMENT Association.

MAJOR T. S. BROWN having, in leaving this country, resigned his office as Treasurer of this Association, the Committee appointed for that purpose have selected as his successor GEO. M. DEXTER, Esq., of Boston.

Those desiring to subscribe will therefore please direct their communications to Geo. M. Dexter, Civil Engineer, etc., Boston, Mass.

A. W. CRAVEN, Secretary, etc.
New York, February 22, 1850.

Railroad Iron.

1,500 Tons weighing 59 lbs. per lineal yard.
500 " " 57 "
500 " " 56 "
500 " " 60 & 61 lbs.

Also 2½" flat rails. All the above being of approved patterns. For sale by

DAVIS, BROOKS, & CO.,
68 Broad street.

N.B.—Rails imported on commission, or at a fixed price.

Railroad Iron.

CONTRACTS for Railroad Iron of any pattern or weight and of a favorite brand, delivered at any port of the U. S., made on favorable terms by

CHARLES ILLIUS,
3m9* 20 Beaver St., New York.

CUT NAILS OF BEST QUALITY, BAR IRON (including Flat Nails) manufactured and for sale by

FISHER, MORGAN & CO.,

75 N. Water St., Philadelphia.

CENTRAL RAILROAD FROM SAVANNAH TO MACON, (Ga.) 190½ miles.

Passenger Trains leave Savannah and Macon daily at 7 a.m.

Passenger trains arrive daily at Savannah, 6 15 p.m.

" " " " " Macon, 6 45 p.m.

This road, in connection with the Macon and Western road from Macon to Atlanta, and the Western and Atlantic road from Atlanta to Dalton, now forms a continuous line of 391½ miles in length* from Savannah to Dalton, Murray county, Ga. and with the Memphis Branch railroad, and Stages connect with the following places :

Tickets from Savannah to Macon,	85 75
" " " Atlanta,	9 50
" " " Augusta,	6 50
" " " Columbus,	15 00
" " " Opelika, [†]	17 00
" " " Jacksonville, Ala.,	20 00
" " " Talladega,	
" " " Huntsville Ala.,	22 00
" " " Decatur,	
" " " Tuscaloosa, Ala.,	22 50
" " " Columbus, Miss.,	
" " " Aberdeen,	28 00
" " " Holly Springs	
" " " Nashville, Tenn.	
" " " Murphreesboro'	25 00
" " " Columbia, do.,	
" " " Memphis, do.,	30 00

An extra Passenger Train leaves Savannah on Saturdays, after the arrival of the Steam-ships from New York, for Macon, and connects with the Macon and Western railroad; and on Tuesdays, after the arrival of the Macon and Western cars, an extra Passenger Train leaves Macon to connect with the Steam ships for New York.

Stages for Tallahassee and intermediate places connect with the road at Macon, Mondays, Wednesdays, and Fridays, and with Milledgeville at Gordon daily.

Passengers for Montgomery, Mobile and New Orleans take stage for Opelika from Barnesville through Columbus a distance of 97 miles, or from Griffin thro' West Point, a distance of 93 miles.

* The Western and Atlantic railroad will soon be completed between Dalton and Chattanooga, a distance of 423½ miles from Savannah, of which due notice will be given.

† Head of the West Point and Montgomery railroad, on which the fare to Montgomery is about \$2.

RATES OF FREIGHT FOR MERCHANDISE GENERALLY, FROM SAVANNAH TO MACON.

Measurment Goods.—Boxes of hats, bonnets, furniture, shoes, saddlery, dry-goods, and other measurement goods, per cubic foot 13 cents.

Crockery Ware, in crates, boxes or hhd's, per cubic foot 10 "

Goods by Weight, 1st class.—Boxes of glass, paints, drugs & confectionary, per 100 lbs, 50 "

2d class—Sugar, coffee, rope, butter, cheese, lard, tobacco, leather, hides, copper, sheet and hoop iron, tin, hard and hollow ware, rice, boxes soap and candles, bagging, and other heavy articles not enumerated below, per 100 lbs., 45 "

3d class—Flour, bacon, liquors, pork, beef, fish, tallow and beeswax, per 100 lbs., 40 "

4th class—Mill-gearing, pig and bar iron, grind and millstones, nails, spikes and coal, 100 lb. 30 "

Barrels of beets, bread, crackers, potatoes, ice, fruit, oysters, onions, and all light bbls, each, 75 "

Oil and molasses per hhd., (smaller casks in proportion) \$6 00 "

Salt per sack not exceeding 4 bushels, 50 "

Goods consigned to Thos. S. Wayne, Forwarding Agent, Savannah, will be forwarded free of commission.

WM. M. WADLEY, Supt.

Savannah, Ga., February 24, 1850.

THE NEWCASTLE MANUFACTURING Co.

continue to furnish at the Works, situated in the town of Newcastle, Del., Locomotive and other steam engines, Jack Screws, Wrought Iron Work and Brass and Iron Castings, of all kinds connected with Steam-boats, Railroads, etc.; Mill Gearing of every description; Cast Wheels (chilled) of any pattern and size, with Axles fitted, also with wrought tires, Springs, Boxes and bolts for Cars; Driving and other wheels for Locomotives.

The works being on an extensive scale, all orders will be executed with promptness and despatch. Communications addressed to Mr. William H. Dobbs, Superintendent, will meet with immediate attention.

ANDREW C. GRAY, President of the Newcastle Manuf. Co.

**Great American Engineering
and Mechanical Work.**
PUBLISHING MONTHLY BY SUBSCRIPTION

SPECIMENS OF THE STONE, IRON, AND WOOD BRIDGES, VIADUCTS, TUNNELS, CULVERTS, &c., of the United States RAILROADS, Illustrated by a Series of DRAWINGS, from actual measurement of the works, including Plans, Elevations, Sections and details of each Structure, accompanied by remarks on the relative merits of the various forms of construction adopted, as regards economy, strength and durability, with Specifications, Estimates, Bills of Timber, Iron, etc., of the several structures: and an APPENDIX, illustrative of the art of Bridge Building as at present practised in Europe; and numerous original Designs for Bridges, Viaducts, Culverts, etc.; the whole calculated to meet the exigencies of Engineers, and assist Draftsmen, Bridge Builders, Mechanics and Students.

BY GEORGE DUGGAN,
ARCHITECT AND CIVIL ENGINEER.

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The First or AMERICAN DIVISION of this important work will be completed in about Twelve Parts, and the APPENDIX in about Eight Parts, each part containing Two double or Four single large folio plates, accompanied by appropriate letter press descriptions, Specifications, Estimates of the cost, Bills of Timber, Iron, &c. of each structure, presenting at a glance the comparative merits, as regards economy, strength, and durability of the various modes of Bridge construction at present practised by the most eminent Engineers in the United States.

The Engraving has been entrusted to first rate artists, and is executing in a manner that cannot fail to give satisfaction, while the price (Seventy-five cents a Month) is such as will place it within the reach of all who take an interest in our great mechanical contrivances.

It shall be optional with Subscribers to take the FIRST DIVISION of the work only, but the APPENDIX cannot be supplied to those who do not subscribe for the FIRST DIVISION.

N.B.—Members of the profession, and others wishing to become subscribers, are requested to send their names without delay to the author, as below, as the publication of the names of Subscribers in one of the early Parts has been determined on, and no more copies of the work will be printed than are found necessary to supply Subscribers. Parties remitting \$9, the cost of First or AMERICAN DIVISION of the work, shall receive it monthly as published, POST FREE, in any part of the United States. To those remitting \$5, and the remainder in six months, it will be sent regularly as published, POSTAGE UNPAID.

Engineers in charge of Railroad Works, are respectfully requested to send Tracings of their Drawings of Bridges, &c., with the Specifications, Bills of Timber, Iron, &c., to GEORGE DUGGAN at his residence No. 179 Henry Street, New York, with a view to their insertion in this work.

NOTICE.

TO BRIDGE BUILDERS, BRIDGE COMPANIES, and Other Individuals and Associations, who have constructed or used Bridges involving the combined principle of *Bracing*, *Counter-bracing* and *Trussing* by means of counteracting braces, keys, wedges, screws, etc., as set forth and explained in my Bridge Patent of 1830, in the words following, to wit: "A system of Counter-bracing, by means of which the truss frames are rendered stiff and unyielding, and the bridge kept in uniform action whether loaded or unloaded"—NOTICE is hereby given, that in all cases in which said combined principle has been introduced into bridges, without due license or authority from me, and without my having been duly remunerated therefor, will be regarded as infringements upon my rights and privileges, and that an amicable adjustment and settlement of all my claims in the premises may be effected by prompt application to my duly authorized Agents thereof, viz: Messrs. Clinton, Knight and Brother, of Cincinnati, Ohio, or Daniel A. Webster, Esq., 8 Pell street of the city of New York.

STEPHEN H. LONG, Patentee.

Louisville, December 10, 1849

FARMERS! ATTENTION!!
John Mayher & Co's
NEW AGRICULTURAL WAREHOUSE
AND SEED STORE,

197 WATER STREET, NEW YORK.
Where they have for Sale, the largest and most complete assortment of Farming Implements, ever offered for sale in this city—all of which they will sell 10 per cent. Cheaper than the same kind of Goods can be bought at any other house in the city. Our Goods are all Warranted to give satisfaction.

FARMERS wanting to purchase, will please call and examine our Stock before buying elsewhere.

Among our assortment may be found the Celebrated Highest Premium Eagle Ploughs! together with all the most approved Ploughs now in use.

Also—Horse Powers, Threshing Machines, Fan Mills, Corn Shellers, Straw Cutters, Corn Mills, Seed Sowers, Churns, Ox Yokes, Ox Scrapers, Hay Rakes, Horse Rakes, Patent Chain Pump (that never freezes nor rusts), and other Pumps; in fact we have everything for Farming Purposes—together with Guano, Bone Dust and other Fertilizers.

JOHN MAYHER & CO.,
197 Water st., N. Y.

February 9, 1850.

N.B.—J. M. & Co. also continue their Old Stand, at 195 Front street, near Fulton Market.

Railroad Iron Wanted.

VIRGINIA AND TENNESSEE R.R. OFFICE, {
Lynchburg, January 25, 1850. }

PROPOSALS will be received at this office, until the 1st of March next, for the delivery in Lynchburg, of iron rails for the Virginia and Tennessee Railroad, to be manufactured in or near this town, of Virginian Iron.

The said iron to be made of the best pig metal, and to be delivered at the following times and in the following quantities, viz: six thousand tons in the year 1851, and the remainder (about 15,000 tons) for the whole road, equally in the years 1852 and 1853.

Separate proposals will also be received for the delivery in Lynchburg, of pig metal, at times and in quantities sufficient for the manufacture of the rails above mentioned, said delivery to commence as early as the 1st of November, 1850.

The rails and pig metal will be subjected to strict inspection—the rails are to weigh about 60 lbs per yard.

At the same time proposals will be received for the above quantity of iron, manufactured anywhere else in America, or in England, to be delivered in Lynchburg or Richmond, under the same general conditions as those prescribed for Virginia Iron, manufactured at Lynchburg. Satisfactory security will be required.

By order of the Board of Directors.

CHAS. F. M. GARNETT,
Chief Engineer.

**Ogden & Martin's
ROSENDALE CEMENT.**

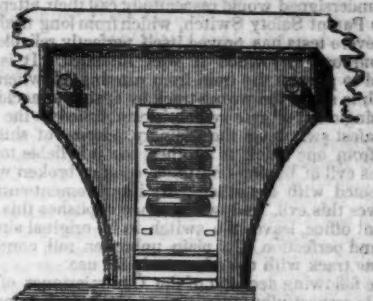
WE are prepared to enter into arrangements for supplying our Cement for public works or other purposes. We warrant the cement equal in every respect to any manufactured in this country. It attains a great degree of hardness, sets immediately under water, and is a superior article for masonry coming in contact with water, or requiring great strength.

For sale in tight barrels, well papered, at their office
OGDEN & MARTIN, 104 Wall st.

February 16, 1850.

The above cement is used in most of the fortifications building by government.

**FULLER'S PATENT
INDIA RUBBER SPRING.**



THESE SPRINGS ARE THE CHEAPEST,
the lightest and most durable of any yet known. They are easily applied to new or old cars, and there is small possibility of any accident occurring to them.

Other parties through Mr. Ray set up claims to an India Rubber Spring which, though the same in principle, is very inferior in its working and durability. Actions are in progress for an Infringement on Fuller's Patent against parties using that Spring.

The superiority of Fuller's Spring over that claimed by Mr. Ray is fully established and has frequently been testified to. The following are from gentlemen who have had much experience with both Springs.

"It will afford me pleasure to recommend your springs to the companies in this region, in preference to Ray's which I am confident are inferior in mechanical arrangement to yours."

JOHN M'RAE,
Engineer S. Carolina R. R., Charleston.

"I do not hesitate to allow you to say that I concur in Mr. M'Ra'e's opinion that Ray's springs are inferior in mechanical arrangement to Fuller's. I repeatedly expressed that opinion long before Mr. M'Ra'e had seen your springs (as I believe) and entertain it still."

WM. PARKER,
Gen'l Supt. of Baltimore and Ohio R. R.

Office of Sup't Norwich & Worcester R.R. Co., {
December 26, 1849. }

"I most fully concur in the opinion of Jno. McRae, Engineer of S. Carolina Railroad, that 'Rays Springs' are inferior to Fuller's Springs,' and shall with pleasure recommend them to all Railroad Companies for adoption. I have used both springs on this road and have no hesitation in saying that I should in all cases prefer Fuller's Spring."

SAM'L H. P. LEE, JR.,
Supt. and Engineer.

Office B. & P. R. R. Co., {
Boston, 20th December, 1849. }

"This company have cars fitted up with both Ray's and Fuller's 'Metallic India Rubber Springs,' and I do not hesitate to say that Fuller's arrangement is very much superior to Ray's."

W. RAYMOND LEE, Supt.

The following result has been obtained by experiment upon one railroad.

A set of Trucks fitted with Steel Springs cost \$190.77 and weigh 2355 lbs. The same with Fuller's Springs, 131.71 1911 lbs.

Difference, 559.06 " 444 lbs.

Not only is there an advantage in the cost, but owing to the great reduction in weight, the car can be made lighter throughout, and so an enormous saving in weight may be effected in a Train.

G. M. KNEVITT, 38 Broadway, N. Y.,
General Agent for the U. S.

The Springs can also be had of
JAMES LEE & CO., 18 India Wharf, Boston, &
JAS. THORNLEY, 110 Chestnut St., Philad.
January 2, 1850.

Railroad Iron.
2,000 Tons Heavy Rails, 57 and 61 lbs. per linear yard, in store, and to arrive, within 20 days.

500 Tons 2½ x 4 inch flat Rails.

1000 Tons 56 lbs. per linear yard.

For sale by DAVIS, BROOKS & CO.,
No. 68 Broad street.

February 2, 1850.

**NOTICE TO
Superintendents of Railroads.**

TYLER'S PATENT SAFETY SWITCH.—The undersigned would respectfully call their attention to his Patent Safety Switch, which from long trial and late severe tests has proved itself perfectly reliable for the purpose for which it was intended. It is designed to prevent the train from running off when the switch is set to the wrong track by design or accident. The single rail or gate switch is established as the best and safest switch for the ordinary purpose of shifting cars from one track to another, but it is liable to the serious evil of having one track open or broken when connected with the other. My improvement entirely removes this evil, and while it accomplishes this important office, leaves the switch in its original simplicity and perfection of a plain unbroken rail, connecting one track with the other ready for use.

The following decision of the Commissioner of Patents is respectfully submitted to Railroad Engineers, Superintendents, and all others interested in the subject.

P. B. TYLER.

(COPY.)

UNITED STATES PATENT OFFICE,
Washington City, D.C., April 29th, 1846.

Sir: You are hereby informed that in the case of the interference between your claims and those of Gustavus A. Nicolls, for improvements in safety switches—upon which a hearing was appointed to take place on the 3d Monday in March, 1846, the question of priority of invention has been decided in your favor. Inclosed is a copy of the decision. The testimony in the case is now open to the inspection of those concerned.

Yours respectfully, EDMUND BURKE,
Commissioner of Patents.

To Philo B. Tyler.

Any further information may be obtained by addressing P. B. TYLER, Springfield, Mass., or JOHN DUNLETON, Agent, 149 Hudson St., New York.

**Brown's Old Established
SCALE WARE HOUSE,**

NO. 234 WATER ST., NEW YORK.

THE Subscriber, Practical Manufacturer of Scales of every description, respectfully asks the attention of Railroad Companies to his Improved Wrought Iron Railroad Track and Depot Scales which for strength, durability, accuracy, convenience in weighing, and beauty of workmanship, are not surpassed by any others in this country.

He is aware that this is rather a bold assertion for him to make, yet he can say with confidence that they have but to be tried to give them precedence over all others.

J. L. BROWN.

For Bank Scales made to order, and all Scales of his make Warranted in every particular.

References given if required.

4tf

ENGINEERS.

Arrowsmith, A. T.,
Buckfield Branch Railroad, Buckfield, Me.

Bancks, C. W.,
Civil Engineer, Vicksburg, Miss.

Berrien, John M.,
Michigan Central Railroad, Marshall, Mich.

Buckland, George,
Troy and Greenbush Railroad.

Clement, Wm. H.,
Little Miami Railroad, Cincinnati, Ohio.

Cozzens, W. H.,
Engineer and Surveyor, St. Louis, Mo.

Davidson, M. O.,
Eckhart Mines, Alleghany Co., Maryland.

Fisk, Charles B.,
Cumberland and Ohio Canal, Washington, D. C.

Felton, S. M.,
Fitchburgh Railroad, Boston, Mass.

Floyd-Jones, Charles,
South Oyster Bay, L. I.

Gzowski, Mr.,
St. Lawrence & Atlantic Railroad, Montreal, Canada.

Gilbert, Wm. B.,
Rutland and Burlington Railroad, Rutland, Vt.

Grant, James H.,
Nashville and Chattanooga R. R., Nashville, Tenn.

Harry, P.,
Binghamton, New York.

Holcomb, F. P.,
Southwestern Railroad, Macon, Ga.

Higgins, B.,

Mansfield and Sandusky Railroad, Sandusky City, O.

Johnson, Edwin F.,
New York and Boston Railroad, Middletown Ct.

Latrobe, B. H.,
Baltimore and Ohio Railroad, Baltimore, Md.

Miller, J. F.,
Worcester and Nashua Railroad, Worcester, Mass.

Morris, Elwood,
Schuylkill Navigation, Schuylkill Haven, Pa.

Morton, A. C.,
Atlantic and St. Lawrence Railroad, Portland, Me.

McRae, John,
South Carolina Railroad, Charleston, S. C.

Nott, Samuel,
Lawrence and Manchester Railroad, Boston,

Prichard, M. B.,
East Tennessee and Georgia R. R., Cleveland, Tenn.

Reynolds, L. O.,
Central Railroad, Savannah, Ga.

Roebling, John A.,
Trenton, N. J.

Roberts, Solomon W.,
Ohio and Pennsylvania Railroad, Pittsburgh, Pa.

Robinson, James P.,
Androscoggin & Kennebec Railroad, Waterville, Me.

Sanford, C. O.,
South Side Railroad, Virginia.

Schlatter, Charles L.,
Northern Railroad (Ogdensburg), Malone, N. Y.

Sours, Peter,
Rahway, New Jersey.

Stark, George.,
Bost., Con. and Mont. R. R., Meredith Bridge, N. H.

Steele, J. Dutton,
Pottstown, Pa.

Trimble, Isaac K.,
Philad., Wil. & Baltimore Railroad, Wilmington, Del.

Tinkham, A. W.,
United States Fort, Bucksport, Me.

Thomson, J. Edgar.,
Pennsylvania (Central) Railroad, Philadelphia.

Whipple, S.,
Civil Engineer and Bridge Builder, Utica, N. Y.

Williams, E. P.,
Auburn and Schenectady Railroad, Auburn, N. Y.

Williams, Charles H.,
Milwaukee, Wisconsin.

Wormeley, Preble,
Central Ohio Railroad, Zanesville, Ohio.

HOTELS.

JONES' HOTEL,
NO. 152 CHESTNUT STREET,

PHILADELPHIA.

BRIDGES & WEST, Proprietors.

DUNLAP'S HOTEL,

On the European Plan,

NO. 135 FULTON STREET,

Between Broadway and Nassau St.,

NEW YORK.

BUSINESS CARDS.

Nathan Caswell,

METAL BROKER, 69 WALL ST., N. Y.

For the Purchase and Sale of Railroad Iron (new and old), Boiler Plates, Pig and Bar Iron, Lead, Tin, Copper, Spelter, etc. Refers to

Messrs. Boorman, Johnston, & Co., New York.

" Grinnell, Minturn & Co.,

" Barstow, Pope & Co.,

" Earp & Brink, Philadelphia.

" E. Pratt & Brother, Baltimore.

John Barstow, Esq., Providence.

Lewis Bullard, Esq., Boston.

6m*

VanRensselaer Stevens,

Sup't Transportation Providence and Worcester R.R., Providence, R.I. Has had 13 years' experience in Operating Railroads. Will go South or West if applied to.

J. & Riley Carr,

Manufacturers of Cast, Shear, German and Blister

STEEL,

Of all Descriptions, Warranted Good.

BAILEY-LANE WORKS, SHEFFIELD.

R. S. DENTON, Agent,

NO. 20 CLIFF ST., NEW YORK.

STEEL AND FILES.

R. S. Denton,

20 CLIFF STREET, NEW YORK,

AGENT FOR

J. & Riley Carr's

BAILEY-LANE WORKS, SHEFFIELD, Manufacturers of Cast, Shear, German and Blister

STEEL

Of all descriptions. Warranted Good

FILES.

Manufacturers of Machinists' Warranted Best Cast Steel Files, expressly for working upon Iron and Steel, made very heavy for recutting.

A full Stock of Steel and Files at all times on hand.

6m

**Cumberland, (Md.) Coals for
Steaming, etc.**

ORDERS RECEIVED FOR AND FILLED
by J. COWLES, 37 Wall St., N. Y.

George O. Robertson,
BROKER IN SCOTCH AND

AMERICAN PIG IRON;

Bar Iron, Lead, Spelter, Tin, Copper, etc.,

No. 4 Liberty Place, MAIDEN LANE,

(Near Broadway.)

NEW YORK

**Manufacture of Patent Wire
ROPE AND CABLES,**

For Inclined Planes, Suspension Bridges, Standing Rigging, Mines, Cranes, Derrick, Tillers, &c., by

JOHN A. ROEBLING, Civil Engineer,

TRENTON, N. J.

Samuel D. Willmott,
MERCHANT, AND MANUFACTURER OF

CAST STEEL WARRANTED SAWS,

IMPORTER OF THE

GENUINE WICKESLY GRINDSTONES

NO. 8 LIBERTY STREET,

NEW YORK.

Doremus & Harris,
ANALYTICAL & CONSULTING CHEMISTS,

179 BROADWAY, NEW YORK.

SCHOOL OF CHEMISTRY.

Dudley B. Fuller & Co.,

IRON COMMISSION MERCHANTS,

No. 133 GREENWICH STREET,

NEW YORK.

Manning & Lee,

GENERAL COMMISSION MERCHANTS,

NO. 51 EXCHANGE PLACE,

BALTIMORE.

Agents for Avalon Railroad Iron and Nail Works.

Maryland Mining Company's Cumberland Coal CED

—'Potomac' and other good brands of Pig Iron.

Railroad Car Manufacturer's Furnishing Store.
J. S. & S. A. MARTINE,
 IMPORTERS AND MANUFACTURERS OF
RAIL ROAD CAR & CARRIAGE LININGS,
 PLUSHES, CURTAIN MATERIALS, ETC.,
 112 WILLIAM ST., NEAR JOHN.

3-4 and 6-4 Damasks, Union and Worsted; Moors, Rattinetis, Cloths, Silk and Cotton Velvets, English Bunting.

S. W. Hill,
 Mining Engineer and Surveyor, Eagle River,
 Lake Superior.

Alfred W. Craven,
 Chief Engineer Croton Aqueduct, New York.

Starks & Pruyne,
 MANUFACTURERS OF ALL KINDS OF
STEAM BOILERS,

52 and 54 Liberty, corner of Pruyne street
 Nathan Starks, **ALBANY** Special Partner
 Wm. F. Pruyne, **R. H. Pruyne.**
 Iron Railing, Bank and Vault Doors, Iron Shutters
 Bridge and Roof Bolts, Heavy Jobbing and Forging
 of all kinds.

For particulars see Adv. in another column.

To Engineers and Surveyors.

E. BROWN AND SON Mathematical inst. makers No. 27 Fulton Slip, New York, make and keep for sale, Theodolites, Levelling inst., Levelling rods, Surveyors Compasses, and Chains, Cases of Mathematical drawing insts. various qualities, together with a general assortment of Ivory Scales and small insts. generally used by Engineers.

Samuel Kimber & Co.,
COMMISSION MERCHANTS
 WILLOW ST. WHARVES, PHILADELPHIA.
 GENTS for the sale of Charcoal and Anthracite
 A Pig Iron, Hammered Railroad Car and Locomotive Axles, Force Pumps of the most approved construction for Railroad Water Stations and Hydraulic Rams, etc., etc.

July, 27, 1849.

James Herron, Civil Engineer,
 OF THE UNITED STATES NAVY YARD,
 PENSACOLA, FLORIDA.,
 PATENTEE OF THE

HERRON RAILWAY TRACK.
 Models of this Track, on the most improved plans, may be seen at the Engineer's office of the New York and Erie Railroad.

To Railroad Companies.—
WROUGHT IRON WHEELS—
 SAFETY AND ECONOMY.
NORRIS' LOCOMOTIVE WORKS,
 SCHENECTADY, NEW YORK,
 Are Manufacturing Wrought Iron Driving, Truck, Tender, and Car Wheels—made from the best American Iron. Address
 E. S. NORRIS.
 May 16, 1849.

Machinery Warehouse.
 S. C. HILLS, No. 43 Fulton street, New York, has constantly for sale Steam Engines, Boilers, Lathes, Chucks, Drills, Planers, Force and Suction Pumps; Tenoning, Morticing and Boring Machines, Shingle Machines, Bolt and Nut Machines, Belting, Oil, Iron and Lead Pipe; Rubber, Percha and Leather Hose, &c., &c.

S. C. H.'s arrangements with several machine shops are such that he can supply, at very short notice, large quantities of machinery.

November 23, 1849.

Cruse & Burke,
 Civil Engineers, Architects and Surveyors,
 Office, New York State Institution of Civil Engineers,
 STATE HALL, ALBANY, N.Y.

Drawings, specifications and surveys accurately executed. Pupils instructed theoretically and practically at a moderate premium. May 26, 1849.

Eaton, Gilbert & Co.,
 Railroad Car, Coach and Omnibus Builders,
 TROY, N.Y.

Hudson River Foundry,
 THOMAS & COLLINS,
 130 Quay Street, Albany.

To Railroad & Navigation Cos.

Mr. M. BUTT HEWSON, Civil Engineer, offers his services to Companies about to carry out the surveys or works of a line of Navigation or Railroad. He can give satisfactory references in New York City as to his professional qualifications; and will therefore merely refer here to the fact of his having been engaged for upwards of two years conducting important Public Works for the British Government.

Communications will find Mr. Hewson at the office of the Railroad Journal, 54 Wall Street, New York.

Walter R. Johnson,
 CIVIL AND MINING ENGINEER AND ATTORNEY FOR PATENTS. Office and Laboratory, F St., opposite the Patent office, Washington, D.C.

Cop Waste.
 CLEAN COP WASTE, suitable for cleaning Railroad, Steamboat and Stationary Engines, constantly on hand and for sale by

KENNEDY & GELSTON,
 5½ Pine St., New York.

October 27, 1849.

3m

IRON.

Iron.

Pig Iron, Anthracite and Charcoal; Boiler and Flue Iron, Spring and Blistered Steel, Nail Rods, Beat Refined Bar Iron, Railroad Iron, Car Axles, Nails, Stove Castings, Cast Iron Pipes of all sizes, Railway Chairs of approved patterns for sale by

COLEMAN, KELTON & CAMPBELL,
 109 N. Water St., Philadelphia.

RONDALE PIG METAL, MANUFACTURED
 23½ to 18 lbs by the Bloomsburg Railroad Iron Co.
 DUDLEY FISHER, Treasurer.
 75 N. Water St., Philadelphia.

Railroad Iron.

500 Tons, afloat, weighing 57 pounds per lineal yard, for sale by

COLLINS, VOSE & CO.,
 158 South St.

New York, November 17, 1849.

1m46

Railroad Iron.

THE Undersigned, Agents for Manufacturers, are prepared to contract to deliver Rails of superior quality, and of any size or pattern, to any ports of discharge in the United States.

COLLINS, VOSE & CO.,
 158 South St.

New York, November 17, 1849.

Railroad Iron.

1675 Tons, weighing about 61 lbs. per yard, 90 tons, weighing about 52 lbs. per yard, and 825 tons, weighing about 53½ lbs. per yard, of the latest and most approved patterns of T rail, for sale by

BOORMAN, JOHNSTON & CO.,
 119 Greenwich street.

New York, Feb. 25, 1850.

N.B.—B. J. & Co are also prepared to take contracts for English rails, delivered in any of the Atlantic ports of the United States.

Railroad Iron.

THE UNDERSIGNED, HAVING made arrangements abroad, are prepared to contract for the delivery of Foreign rails, of approved brands upon the most favorable terms.

They will also make contracts for American rails, made at their Trenton works, from Andover Iron, in whole or in part, as may be agreed upon.

They are prepared to furnish Telegraph, Spring and Market Wire; Braziers and Wire Rods; Rivets and Merchant Bars to order, all made exclusively from Andover Iron. The attention of parties who require iron of the very best quality for special purposes, is respectfully invited.

COOPER & HEWITT,
 17 Burling Slip, New York.

February 15, 1850.

Glendon Refined Iron.

Round Iron, Band Iron, Hoop Iron,
 Square " Flat " Scroll "
 Axles, Locomotive Tyres,
 Manufactured at the Glendon Mills, East Boston, for
 sale by GEORGE GARDNER & CO.,
 5 Liberty Square, Boston, Mass.
 Sept. 15, 1849.

PATENT HAMMERED RAILROAD, SHIP & BOAT SPIKES.—The Albany Iron Works have always on hand, of their own manufacture, a large assortment of Railroad, Ship and Boat Spikes, from 2 to 12 inches in length, and of any form of head; From the excellence of the material always used in their manufacture, and their very general use for railroads and other purposes in this country, the manufacturers have no hesitation in warranting them fully equal to the best spikes in market, both as to quality and appearance. All orders addressed to the subscribers at the works will be promptly executed.

JOHN F. WINSLOW, Agent.
 Albany Iron and Nail Works, T: 17, N.Y.
 The above Spikes may be had at factory prices, of
 Erastus Corning & Co, Albany; Menitt & Co., New
 York; E. Pratt & Brainerd, Baltimore, Md.

LAP-WELDED WROUGHT IRON TUBES

TUBULAR BOILERS,
 FROM 1 1-2 TO 8 INCHES DIAMETER.

These are the ONLY Tubes of the same quality and manufacture as those so extensively used in England, Scotland, France and Germany, for Locomotive, Marine and other Steam Engine Boilers

THOMAS PROSSER,
 Patented.

28 Platt street, New York.

Railroad Iron.

THE UNDERSIGNED ARE PREPARED TO contract for the delivery of English Railroad Iron of favorite brands, during the Spring. They also receive orders for the importation of Pig, Bar, Sheet, etc. Iron.

THOMAS B. SANDS & CO.,
 22 South William street,
 February 3, 1849. New York.

Iron Store.

THE Subscribers, having the selling agency of the following named Rolling Mills, viz: Norristown, Rough and Ready, Kensington, Philadelphia, Pottsgrove and Thorndale, can supply Railroad Companies, Merchants and others, at the wholesale mill prices for bars of all sizes, sheets cut to order as large as 55 in. diameter; Railroad Iron, domestic and foreign; Locomotive tire welded to given size; Chairs and Spikes; Iron for shafting, locomotive and general machinery purposes; Cast, Shear, Blister and Spring Steel; Boiler rivets; Copper; Pig Iron, etc., etc.

MORRIS, JONES & CO.,
 Iron Merchants,
 Schuylkill 7th and Market Sts., Philadelphia.

August 16, 1849.

1y33

Railroad Iron.

THE MOUNT SAVAGE IRON WORKS, ALLEGHENY county, Maryland, having recently passed into the hands of new proprietors, are now prepared, with increased facilities, to execute orders for any of the various patterns of Railroad Iron. Communications addressed to either of the subscribers will have prompt attention.

J. F. WINSLOW, President.

Troy, N.Y.

ERASTUS CORNING, Albany.

WARREN DELANO, Jr., N.Y.

JOHN M. FORBES, Boston.

ENOCH PRATT, Baltimore, Md.

November 6, 1848.

Railroad Iron.

THE SUBSCRIBERS ARE PREPARED TO take orders for Railroad Iron to be made at their Phoenix Iron Works, situated on the Schuylkill River, near this city, and at their Safe Harbor Iron Works, situated in Lancaster County, on the Susquehanna river; which two establishments are now turning out upwards of 1800 tons of finished rails per month.

Companies desirous of contracting will be promptly supplied with rails of any required pattern, and of the very best quality.

REEVES, BUCK & CO.,

45 North Water St., Philadelphia.

March 15, 1849.

Monument Foundry.

A. & W. DENMEAD & SON,
Corner of North and Monument Sts.—Baltimore,

HAVING THEIR

IRON FOUNDRY AND MACHINE SHOP
In complete operation, are prepared to execute
faithfully and promptly, orders for
Locomotive or Stationary Steam Engines,
Woolen, Cotton, Flour, Rice, Sugar Grist, or Saw
Mills,

Slide, Hand or Chuck Lathes,
Machinery for cutting all kinds of Gearing.
Hydraulic, Tobacco and other Presses,
Car and Locomotive patent Ring Wheels, war-
ranted,
Bridge and Mill Castings of every description,
Gas and Water Pipes of all sizes, warranted,
Railroad Wheels with best faggotted axle, fur-
nished and fitted up for use, complete

If Being provided with Heavy Lathes for Bor-
ing and Turning Screws, Cylinders, etc., we can
furnish them of any pitch, length or pattern.

Old Machinery Renewed or Repaired—and
Estimates for Work in any part of the United States
furnished at short notice.

June 8, 1849.

Iron Wire.

REFINED IRON WIRE OF ALL KINDS,
Card, Reed, Cotton-flyer, Annealed, Broom,
Buckle, and Spring Wire. Also all kinds of Round,
Flat or Oval Wire, best adapted to various machine
purposes, annealed and tempered, straightened and
cut any length, manufactured and sold by

ICHABOD WASHBURN.

Worcester, Mass., May 25, 1849.

American and Foreign Iron.**FOR SALE,**

300 Tons A 1, Iron Dale Foundry Iron.	
100 " 1, "	" "
100 " 2, "	" "
100 " Forge	" "
400 " Wilkesbarre	" "
100 " Roaring Run" Foundry Iron.	
300 " Fort	" "
50 " Catoctin	" "
250 " Chikiswalungo	" "
50 " "Columbia" "chilling" iron, a very su- perior article for car wheels.	
75 " "Columbia" refined boiler blooms.	
30 " 1 x 1 Slit iron.	
50 " Best Penna. boiler iron.	
50 " Puddled" "	
50 " Bagnall & Sons refined bar iron.	
50 " Common bar iron.	
Locomotive and other boiler iron furnished to order.	
GOODHUE & CO.,	
New York.	64 South street

**American Pig, Bloom and
Boiler Iron.**

HENRY THOMPSON & SON,
No 57 South Gay St., Baltimore, Md.
Offer for sale, Hot Blast Charcoal Pig Iron made at
the Catoctin (Md.), and Taylor (Virginia), Furn-
aces; Cold Blast Charcoal Pig Iron from the Clover-
dale and Catawba, Va., Furnaces, suitable for Wheels
or Machinery requiring extra strength; also Boiler
and Flue Iron from the mills of Edge & Hilles in Del-
aware, and best quality Boiler Blooms made from Cold
Blast Pig Iron at the Shaysandah Works, Va. The
productions of the above establishments can always be
had at the lowest market price for approved paper.

American Pig Iron of other kinds, and Rolled and
Hammered Bar Iron furnished at lowest prices. Agents
for Watson's Perth Amboy Fire Bricks, and
Rich & Co. New York Salamander Iron Chests.
Baltimore, June 14, 1849.

6 mos

LAP-WELDED WROUGHT IRON TUBES
for Tubular Boilers, from 1 to 15 inc. es diameter,
and an" length not exceeding 17 feet—manufactured
by the Caledonian Tube Company, Glasgow, and
for sale by

IRVING VAN WART,
12 Platt street, New York.

JOB CUTLER, Patentee.

If These Tubes are extensively used by the British
Government, and by the principal Engineers and Steam
Marine and Railway Companies in the Kingdom.

Pig and Bloom Iron.

THE Subscribers are Agents for the sale of numer-
ous brands of Charcoal and Anthracite Pig Iron,
suitable for Machinery, Railroad Wheels, Chains, Hol-
lowware, etc. Also several brands of the best Pudd-
ling Iron, Juniata Blooms suitable for Wire, Boiler
Plate, Axe Iron, Shovels, etc. The attention of those
engaged in the manufacture of Iron is solicited by

A. WRIGHT & NEPHEW,
Vine Street Wharf, Philadelphia.

IRON.

THE SUBSCRIBERS having resumed the agency
of the New-Jersey Iron Company, are prepared to
execute orders for the different kinds and sizes of
Iron usually made at the works of the company, and
offer for sale on advantageous terms—

150 tons No. 1 Boonton Foundry Pig Iron.	
100 " No. 2 do. do. do.	
300 " Nos. 2 & 3 Forge do. do.	
100 " No. 2 Glendon do. do.	
140 " Nos. 2 & 3 Lehigh Crane do. do.	
100 " No. 1 Pompton Charcoal do.	
100 " New-Jersey Blooms	
50 " New-Jersey Faggotting Iron, for shafts Best Bars, $\frac{1}{2}$ to 4 inch by $\frac{1}{2}$ to 1 inch thick.	
Do do Rounds and Squares, $\frac{1}{2}$ to 3 inch.	
Rounds and Squares, 3-16 to 1 inch.	
Half Hoops, $\frac{1}{2}$ to 1 in. Ovals & Half Ovals $\frac{1}{2}$ to 1 in.	
Bands, $\frac{1}{2}$ to 4 inch. Hoops, $\frac{1}{2}$ to 2 inch.	
Trunk Hoops, $\frac{1}{2}$ to 1 in. Horse Shoe & Nut Iron.	
Nail Plates. Railroad Spikes.	

DUDLEY B. FULLER & CO., 139 Greenwich-
st. and 85 Broad-st.

WILLIAM JESSOP & SONS'
CELEBRATED CAST-STEEL.

The subscribers have on hand, and are constantly re-
ceiving from their manufacturer,

PARK WORKS, SHEFFIELD,

Double Refined Cast Steel—square, flat and octagon.
Best warranted Cast Steel—square, flat and octagon.
Best double and single Shear Steel—warranted.

Machinery Steel—round.

Best and 2d gy. Sheet Steel—for saws and other pur-
poses.

German Steel—flat and square, "W. I. & S." "Eagle"
and "Goat" stamps.

Genuine "Sykes," L Blister Steel.

Best English Blister Steel, etc., etc., etc.

All of which are offered for sale on the most favora-
ble terms by

WM. JESSOP & SONS,
91 John street, New York.

Also by their Agents—

Curtiss & Hand, 47 Commerce street, Philadelphia.
Alex'r Fullerton & Co., 119 Milk street, Boston.
Stickney & Beatty, South Charles street, Baltimore.
May 6, 1849.

**SPRING STEEL FOR LOCOMOTIVES, TEN-
DERS AND CARS.**—The subscriber is engaged
in manufacturing spring steel from $1\frac{1}{2}$ to 6 inches in
width, and of any thickness required: large quantities
are yearly furnished for railroad purposes, and wher-
ever used its quality has been approved of. The estab-
lishment being large, can execute orders with great
promptitude, at reasonable prices, and the quality war-
anteed. Address J. F. WINSLOW, Agent,
Albany Iron and Nail Works.

**JOHNSON, CAMMELL & CO's
Celebrated Cast Steel,**

AND
ENGINEERING AND MACHINE FILES,
which for quality and adaptation to mechanical uses,
have been proved superior to any in the United States.
Every description of square, octagon, flat and round
cast steel, sheet, shovel and railway spring steel, best
double and single shear steel, German steel, flat and
square, goat stamp, etc. Saw and file steel, and steel
to order for any purposes, manufactured at their Cy-
clop Steel Works Sheffield.

JOHNSON, CAMMELL & CO.,
100 William St., New York.

November 23 1849.

COLUMBUS, OHIO,**Railroad Car Manufactory.****RIDGWAYS & KIMBALL,**

HAVE established at this central point, the manu-
facture of Passenger, Freight, Gravel and Hand
Cars for Railroads, and assure all Western Railroad
Companies that it will be their constant aim to pro-
cure the best materials and workmen, and to turn out
the best kind of work at fair prices. Specimens may
be seen on the Columbus and Xenia Railroad. The
patronage of Railroad Companies is respectfully solic-
ited.

1849

American Cast Steel.

THE ADIRONDAC STEEL MANUFAC-
TURING CO. is now producing, from Amer-
ican iron, at their works at Jersey City, N.J., Cast
Steel of extraordinary quality, and is prepared to
supply orders for the same at prices below that of
the imported article of like quality. Consumers
will find it to their interest to give this a trial. Orders
for all sizes of hammered cast steel, directed as
above, will meet with prompt attention.

May 28, 1849.

To Steam Engine Builders.

T he Undersigned offer for sale, at less than half its
cost, the following new machinery, calculated for
an engine of 62 inches cylinder and 10 feet stroke, viz:

2 Wrought Iron Cranks, 60 inches from centre to
centre.

1 Do. do. Connecting Rod Strap.

2 Do. do. Crank Pins.

1 Eccentric Strap.

1 Diagonal Link with Brasses.

1 Cast Iron Lever Beam (forked).

The above machinery was made at the West Point
Foundry for the U. S. Steamer Missouri, without regard
to expense, is all finished complete for putting to-
gether, and has never been used. Drawings of the
cranks can be seen on application to

HENRY THOMPSON & SON,
No. 57 South Gay St., Baltimore, Md.

Sept. 12, 1849.

Railroad Instruments.

THEODOLITES, TRANSIT COMPASSES,
and Levels, with Fraunhofer's Munich Glasses,
Surveyor's Compasses, Chains, Drawing Instru-
ments, Barometers, etc., all of the best quality and
workmanship, for sale at unusually low prices, by

E. & G. W. BLUNT,

No. 179 Water St., cor. Burling Slip.

New York, May 19, 1849.

**Ballard's Improved
JACK-SCREW.**

PATENTED.

THE ADVANTAGES OF THIS
Screw for Stone Quarries, Rail-
roads, Steam Boiler Builders, and
for other purposes are superior to
any other similar machine.

The improvement consists in being
able to use either end of the
screw, as occasion requires.

It is capable of raising the heaviest
Locomotive with ease, being
portable, strong and powerful, and
not likely to get out of order.

Many Railroad Companies and
Boiler Makers have them in use—
by whom they are highly recom-
mended.

JACK SCREWS,
of various sizes, power and price,
constantly on hand at the manufac-
tory.

No. 7 Eldridge Street,
near Division Street.

New York, Jan. 19, 1850.

**To Railroad Companies and
Contractors.**

FOR SALE.—Two Locomotive Engines and Ten-
ders, at present in use on the Beaver Meadow
Railroad, being too light for their coal trains, but well
calculated for either gravel or light passenger trains.

They weigh, in running order, about 8 tons each—
having one pair of driving wheels 4 feet diameter, 4
truck wheels 30 inches diameter, with cylinders 10 in.
diameter, and 18 inches stroke of piston. Tenders on
4 wheels. Address JAMES ROWLAND,

Prest. Beaver Meadow Railroad & Coal Co.,
Philadelphia.

or, L. CHAMBERLAIN, Sec'y,

at Beaver Meadow, Pa.

20th

May 19, 1849.

To Inventors and Patentees.

OWEN G WARREN, ARCHITECT, Has had
many years' experience as Agent for obtaining
Patents, both in this country and Europe, and will
transact such business promptly and reasonably. Per-
sons at a distance can have their business done by
correspondence—without the necessity of visiting this city
or Washington. Office No. 94 Merchants Exchange,
Wall st., corner of Hanover st., up stairs.

To Railroad Companies.

FOR SALE—A Second-hand Locomotive Engine and Tender, of about 10 tons weight, in good order, and warranted to perform well. Any company wanting a cheap engine for passenger or light burden train, will rarely meet with an opportunity so favorable as the present. The engine and tender are in perfect running order, and will be tested to the satisfaction of any one wishing to purchase. Price \$1,500.

Address J. B. MOORHEAD,
Frazer P.O., Chester county, Pa.

P.S.—The Engine can be seen by calling on H. Osmond & Co., Car-builders, Broad st., Philadelphia.

September 6, 1849.

India-rubber for Railroad Cos.

RUBBER SPRINGS—*Bearing and Buffer—Fuller's Patent—Hoses from 1 to 12 inches diameter. Suction Hose. Steam Packing—from 1-16 to 2 in. thick. Rubber and Gutta Percha Bands.* These articles are all warranted to give satisfaction, made under Tyer & Helm's patent, issued January, 1849.—No lead used in the composition. Will stand much higher heat than that called "Goodyear's," and is in all respects better than any in use. Proprietors of railroads do not be overcharged by pretenders.

HORACE H. DAY,

Warehouse 23 Courtlandt street.

New York, May 21, 1849.

Fire Brick.

THE Subscribers have constantly on hand Raftord's Stourbridge, Oak Farms Stourbridge, Lister, Wortley, Red and White Welsh Fire Bricks, common and fancy shapes. Also,

ROOFING SLATES.

from the best Welch quarries, and of all sizes. Also,

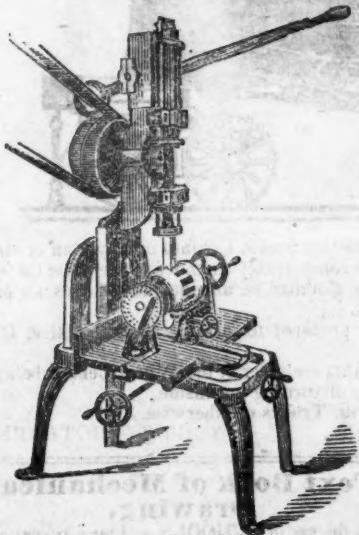
COAL.

of all kinds—Liverpool Orrell and Cannel, Scotch, New Castle, Pictou, Sidney, Cumberland, Virginia, and all kinds of Anthracite coals. Also,

Pig Iron, Salt, etc., etc., for sale at the lowest market price. Apply to

SAMUEL THOMPSON & NEPHEW,
275 Pearl and 43 Gold sts., New York.

November, 23, 1849.

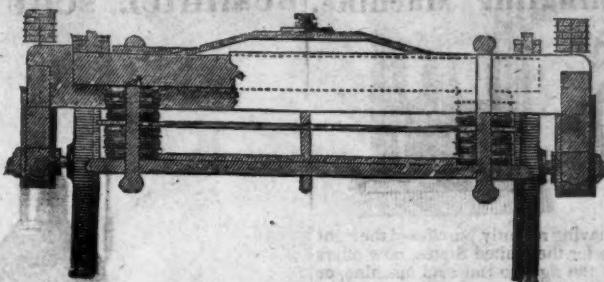
**Capt. Alfred Swingle's
PATENT BORING
& MORTISING MACHINE.**

The above Machine was invented by A. SWINGLE, of Texas, in 1846, and Letters Patent were taken out in July, 1848. As a labor saving Machine it stands unrivaled even in these days of improvements. Its uses are innumerable; it may be successfully applied to Doors, Sashes, Carriages, Wheel-Hubs, and in fact to all kinds of work where the Auger and Chisel can be brought to bear.

The only limit to the speed of the working of this machine is the heating of the tools used. It will perform at least the labor of twelve men, and in vastly better manner, and can be worked equally well by steam power or by hand. It has been used and has given universal satisfaction.

For further information apply to H. B. TEBBETTS, 40 Wall St., New York, to whom all orders are to be addressed.

New York, December 15, 1849.

**FULLER'S PATENT
INDIA RUBBER CAR SPRINGS.**

RAILROAD COMPANIES are cautioned, before purchasing Springs, to examine the actual patents and judge for themselves.

Persons, under the Title of the New England Car Company, seeking fraudulently to invade Fuller's rights have put forth so many statements for the purpose of misleading the public, that an enumeration of some facts is absolutely necessary, for the purpose of putting persons interested upon their guard.

Fuller's patent is for the application of Discs of India-rubber with Metal Plates, for forming Springs for Railway Cars and Carriages—either one disc and two plates, or ten discs and plates, or any other number, are equally covered by the patent. Fuller is not bound to the use of short discs—he may use long discs and plates.

Ray's patent is simply and wholly the forming of air tight rubber cylinders, with hoops or bands round the outside, and the combination of elasticity of India rubber, with the elasticity of atmospheric air confined in the cylinder, and in no part of his patent is he authorised to use the form of spring which he is now fraudulently supplying to Railroad Companies. Such springs are direct and positive infringements of the very letter of Fuller's patent.

Fuller's patent is dated October, 1845, Ray's patent, August, 1848.

The spring patented by Ray never has been put in operation, and never can be made useful for Railroad cars.

A mere experiment, even if made, it is well known does not prove an invention; and it is ridiculous for such parties to hope to mislead the Presidents and Superintendents of Railroad companies, by claiming the invention because Ray alledges he made an experiment—which Fuller had made before him—had actually brought into working order, and obtained a patent for—and this too before Mr. Ray states he made his experiment—and that experiment not claimed to have been applied to a car or carriage.

Besides, the invention could not have been developed until India rubber, properly Vulcanised, could be made of a sufficient thickness. In the United States the art of vulcanising rubber by steam heat, (by which

**Arch St. Machine Shop.
BIRKENBINE, MARTIN & TROTTER,
Makers of****STEAM ENGINES,****and
HYDRAULIC MACHINERY,
NO. 16 ARCH STREET,
PHILADELPHIA,**

Will construct Steam Engines, Pumps, for Draining Mines and Land; supplying Water to Towns, Factories, Farms, etc;

Also, Street Stops, Fire Plugs, Water Tanks, and Hydraulic Rams, with

(BIRKENBINE'S PATENT VALVES.)
B. M. & T. contract for Warming and Ventilating Buildings by Steam or Warm Water.

**J. E. Mitchell,
NO. 14 OLD YORK ROAD, PHILADELPHIA.
Importer and manufacturer of**

New Castle Nova Scotia } Grindstones, of all sizes and grits.

Wickersley French Burr }

Cocacoea American and }

Patent compressed Garnkirk }

Burn Blocks, Bolting Cloths, Mill Irons, etc.

Millstones, made to order, with all the recent improvements.

Fire Bricks and Tiles of various sizes.

Grindstones, of all sizes and grits.

means only can a body of rubber having any considerable thickness be vulcanised,) was not introduced until after the grant by the American government of the patent for springs to Fuller—whereas the process of vulcanising rubber by steam heat was invented in England about three years previously, and was used by Fuller there. This fact refutes entirely the claim of invention put forth by Mr. Ray, and proves the impossibility of his pretensions being true.

Fuller was the first and only inventor of the spring. A Mr. Dorr, whose connection with Mr. Goodyear is well known in this country, applied in England to Mr. Fuller, after he had published and patented his invention, and introduced another party for the purpose of obtaining the agency for the United States. They were furnished with a complete set of drawings and models, and with instructions to make arrangements for the supply of material of American manufacture—from that hour to the present not a single communication has been received from them. Some of these identical models have been traced into the hands of parties now seeking to invade Fuller's rights, and who have exhibited them as specimens of their own invention.

After this, the conveyance was made by Goodyear to certain parties here for the use for railroad springs of what he calls his Metallic rubber. Comment is unnecessary.

There are 5 or 6 different processes for the manufacture of vulcanised rubber, patented by as many different parties, some here, some in England, either of which would probably make good springs.

A large and powerful company has been organised under Fuller's patent, the particulars of which shall be given very shortly.

An action has been commenced against three railroad companies for infringement; and all other parties will assuredly be prosecuted if they continue farther to infringe upon Fuller's patent.

W. C. FULLER,

The only persons authorised to supply the Springs are G. M. KNEVITT, 38 Broadway, N. York, General Agent for the U. S.; and JAS. LEE & Co., 18 India Wharf, Boston. JOHN THORNLEY, Chestnut st., Philad.

To the Proprietors of Rolling Mills and Iron Works.

THE Undersigned—Proprietors of Townsend's Furnace and Machine Shop, Albany—are extensively engaged in the manufacture of Machinery and fixtures for Iron, and Copper Rolling Mills, and Iron Works. Having paid particular attention to the manufacture of Rolls (Rollers), both chilled and dry-sand, they feel confident that they can execute orders for such castings in a satisfactory manner. And to give assurance of this, they beg leave to refer to the following named persons, proprietors and managers of some of the most extensive rolling mills in the country, viz.: Jno. F. Winslow, J. Tuckerman, H. Burden, W. Burtt, J. & J. Rogers, Saltus & Co., J. B. Bailey, L. G. B. Cannon, Hawkins & Atwater, etc., etc.

F. & T. TOWNSEND.

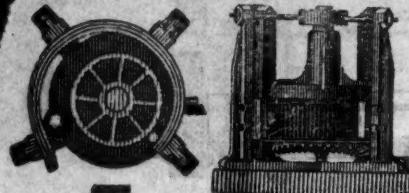
Albany, August 18, 1849.

Steam Boiler Explosions.

THE Subscriber having been appointed sole Agent for Faber's Magnetic Water Gauge, is now ready to supply the trade, and also individuals with this celebrated instrument. Besides the greatest safety from explosion resulting from its use, it is a thorough check against careless stoking and feeding. In marine engines it will regulate the exact quantity required in the "blow off." Pamphlets containing full information, can be had free on application to the Agent JOSEPH P. PIRSON, Civil Engineer, 5 Wall St.,

MACHINERY.

Henry Burden's Patent Revolving Shingling Machine.



THE Subscriber having recently purchased the right of this machine for the United States, now offers to make transfers of the right to run said machine, or sell to those who may be desirous to purchase the right for one or more of the States.

This machine is now in successful operation in ten or twelve iron works in and about the vicinity of Pittsburgh, also at Phoenixville and Reading, Pa., Covington Iron Works, Md., Troy Rolling Mills, and Troy Iron and Nail Factory, Troy, N. Y., where it has given universal satisfaction.

Its advantages over the ordinary Forge Hammer are numerous: considerable saving in first cost; saving in power; the entire saving of shingler's, or hammerman's wages, as no attendance whatever is necessary, it being entirely self-acting; saving in time from the quantity of work done, as one machine is capable of working the iron from sixty puddling furnaces; saving of waste, as nothing but the scoria is thrown off; and that most effectually; saving of staffs, as none are used or required. The time required to furnish a bloom being only about six seconds, the scoria has no time to set, consequently is got rid of much easier than when allowed to congeal as under the hammer. The iron being discharged from the machine so hot, rolls better and is much easier on the rollers and machinery. The bars roll rounder, and are much better finished. The subscriber feels confident that persons who will examine for themselves the machinery in operation, will find it possesses more advantages than have been enumerated. For further particulars address the subscriber at Troy, N. Y.

P. A. BURDEN.

Railroad Spikes and Wrought Iron Fastenings.

THE TROY IRON AND NAIL FACTORY, exclusive owner of all Henry Burden's Patented Machinery for making Spikes, have facilities for manufacturing large quantities upon short notice, and of a quality unsurpassed.

Wrought Iron Chairs, Clamps, Keys and Bolts for Railroad fastenings, also made to order. A full assortment of Ship and Boat Spikes always on hand.

All orders addressed to the Agent at the Factory will receive immediate attention.

P. A. BURDEN, *Agent*,
Troy Iron and Nail Factory, Troy, N. Y.

RAILROAD WHEELS.

CHILLED RAILROAD WHEELS.—THE UNDERSIGNED are now prepared to manufacture their Improved Corrugated Car Wheels, or Wheels with any form of spokes or discs, by a new process which prevents all strain on the metal, such as is produced in all other chilled wheels, by the manner of casting and cooling. By this new method of manufacture, the hubs of all kinds of wheels may be made whole—that is, without dividing them into sections—thus rendering the expense of banding unnecessary; and the wheels subjected to this process will be much stronger than those of the same size and weight, when made in the ordinary way.

A. WHITNEY & SON,
Willow St., below 13th,
Philadelphia, Pa.

CHILLED RAILROAD WHEELS.—THE UNDERSIGNED, the Original Inventor of the *Plate Wheel* with solid hub, is prepared to execute all orders for the same, promptly and faithfully, and solicits a share of the patronage for those kind of wheels which are now so much preferred, and which he originally invented after a large expenditure of time and money.

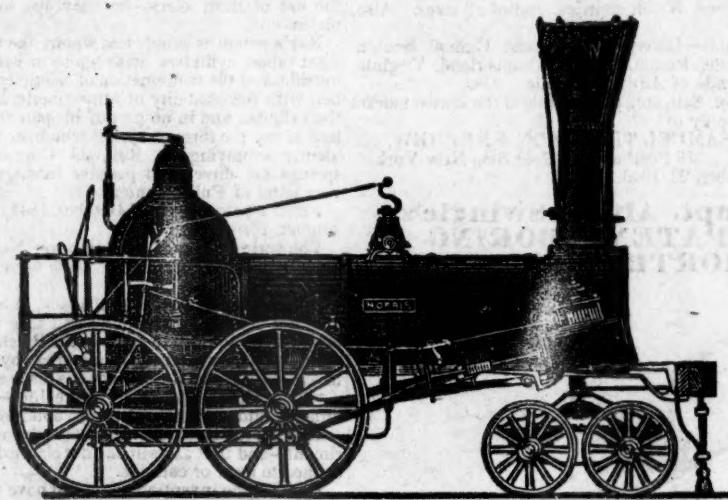
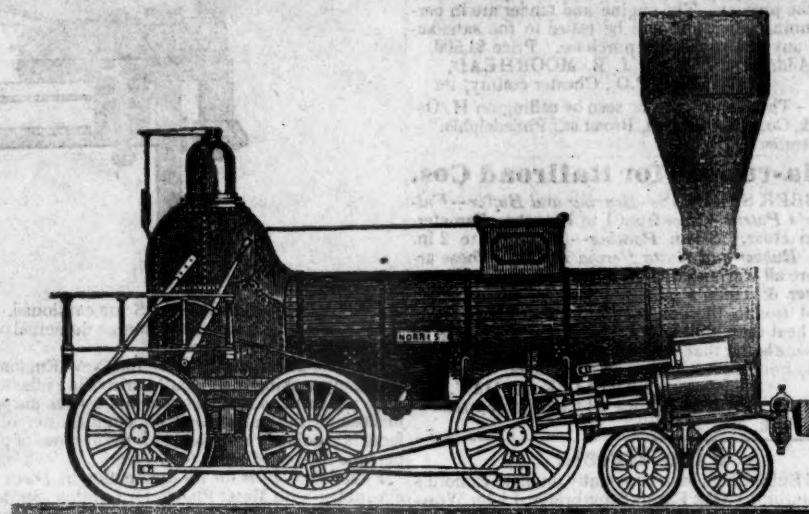
A. TIERS,
Point Pleasant Foundry.

He also offers to furnish Rolling Mill Castings, and other Mill Gearing, with promptness, having, he believes, the largest stock of such patterns to be found in the country.

Kensington, Philadelphia Co.,
March 12, 1848.

A. T.
P. A. BURDEN, Agent.

NORRIS' LOCOMOTIVE WORKS.
BUSHHILL, SCHUYLKILL SIXTH-ST., PHILADELPHIA,



THE UNDERSIGNED Manufacture to order Locomotive Steam Engines of any plan or size. Their shops being enlarged, and their arrangements considerably extended to facilitate the speedy execution of work in this branch, they can offer to Railway Companies unusual advantages for prompt delivery of Machinery of superior workmanship and finish.

Connected with the Locomotive business, they are also prepared to furnish, at short notice, Chilled Wheels for Cars of superior quality.

Wrought Iron Tyres made of any required size—the exact diameter of the Wheel Centre, being given. The Tires are made to fit on same without the necessity of turning out inside. Iron and Brass castings, Axles, etc., fitted up complete with Trucks or otherwise.

NORRIS, BROTHERS

LAWRENCE'S ROSENDALE HYDRAULIC CEMENT. This Cement is warranted equal to any manufactured in this country, and has been pronounced superior to Francis' "Roman." Its value for Aqueducts, Locks, Bridges, Floors, and all Masonry exposed to dampness, is well known, as it sets immediately under water, and increases in solidity for years. For sale in lots to suit purchasers, in tight papered barrels, by JOHN W. LAWRENCE,

142 Front-street, New York.

Orders for the above will be received and promptly attended to at this office.

32 1/2.

PATENT MACHINE MADE HORSE-SHOES.

The Troy Iron and Nail Factory have always on hand a general assortment of Horse Shoes, made from Refined American Iron.

Four sizes being made, it will be well for those ordering to remember that the size of the shoe increases as the numbers—No. 1 being the smallest.

P. A. BURDEN, Agent.
Troy Iron and Nail Factory, Troy, N. Y.

Text Book of Mechanical Drawing,

FOR the use of SCHOOLS and SELF-INSTRUCTION, containing,

1st. A series of progressive practical problems in Geometry, with full explanations, couched in plain and simple terms; showing also the construction of the parallel ruler, plane scales and protractor.

2d. Examples for drawing plans, sections and elevations of Buildings and Machinery, the mode of drawing elevations from circular and polygonal plans, and the drawing of Roman and Grecian Mouldings.

3d. An introduction to Isometrical drawing, with 4 plates of examples.

4th. A treatise on Linear Perspective, with numerous examples and full explanations, rendering the study of the art easy and agreeable.

5th. Examples for the projection of shadows. The whole illustrated with 50 STEEL PLATES. Published by WM. MINIFIE & CO., 114 Baltimore St., Baltimore Md.

Price \$3, to be had of all the principal booksellers.

AMERICAN RAILROAD JOURNAL.

Mr. HALE:—“The New England Car Co., having been engaged for the last six months in introducing the Vulcanized India-rubber Car Springs upon the different railroads in this and other states, and having in particular introduced it upon the Boston and Worcester railroad with perfect success, were much gratified to find, by your paper of this morning, that the article had given satisfaction to the president of that corporation, and the terms of just commendation in which you were pleased to speak of it. But their gratification was scarcely equalled by their surprise, when, or arriving at the close of your paragraph, they found the results of all their labors attributed to a foreign source, with which the New England Car Co. has no connection. The material used on the Boston and Worcester railroad, and all the other railroads in this country, where any preparation of India-rubber has been successfully applied, is entirely an American invention, patented in the year 1844 to Charles Goodyear, of New Haven, Conn., and the application of it to this purpose and the form in which it is applied are the invention of F. M. Ray of New York. The only material now in use, and so far as has yet appeared, the only preparation of India rubber capable of answering the purpose, has been furnished under these patents by the New England Car Company, manufactured under the immediate inspection of their own agent. If any other should be produced, the right to use it would depend upon the question of its interference with Mr. Goodyear's patent. The New England Car Company have their place of business in this city at No. 99 State street, and are prepared to answer all orders for the Vulcanised India rubber Car Springs, of the same quality and of the same manufacture as those which they have already placed on your road, and most to the other roads terminating in this city.”

And yet Mr. Knevitt is using these experiments made upon the Springs of the Car Company to induce the public to purchase his springs, and is attempting to impose upon them the belief that the springs used were furnished by him! We ask whether such a course is honorable, or entitles his statements to much consideration from the public.

The above Springs are for sale 98 Broadway, New York, and 99 State street, Boston.

EDWARD CRANE Agent, Boston.
F. M. RAY, Agent, New York.

Boston, May 8, 1849.

NICOLL'S PATENT SAFETY SWITCH FOR Railroad Turnouts. This invention for some time in successful operation on one of the principal railroads in the country, effectually prevents engines and their trains from running off the track at a switch, left wrong by accident or design. It acts independently of the main track rails; being laid down or removed without cutting or displacing them.

It is never touched by passing trains, except when in use, preventing their running off the track. It is simple in its construction and operation, requiring only two castings and two rails; the latter, even if much worn or used, not objectionable.

Working models of the Safety Switch may be seen at Messrs. Davenport, Bridges & Kirk's Cambridge Port, Mass., and at the office of the Railroad Journal, New York.

Plans, Specifications, and all information obtained, on application to the Subscribers, Inventor and Patentee.

G. A. NICOLLS,
Reading, Pa.

Railroad Lanterns.

COPPER and Iron Lanterns for Railroad Engines, fitted with heavy silver plated Parabolic Reflectors of the most approved construction, and Solar Argand Lamps; manufactured by

HENRY N. HOOPER & CO.,
No. 24 Commercial St. Boston.

August, 16, 1849.

6m33

NORRIS' LOCOMOTIVE WORKS,

SCHENECTADY, N. Y.

THESE Works are in full operation in Manufacturing to order, Locomotive Steam Engines & Tenders, of the best principle and construction of material, using wrought iron heavy frames with pedestals welded thereto, and all parts of the engine made of the best wrought iron, except cylinders, pumps and boxes—obtaining greater durability, and carrying less weight over the road, than engines constructed of cast iron.

Wrought Iron Tires made any required size, and Tire Bars bent and welded with dispatch.

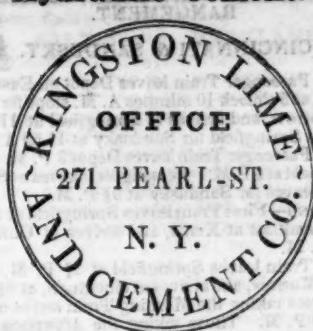
Chilled Wheels for Cars, Tucks and Tenders, made from the toughest iron.

Driving and Tender and Car Wheels fitted to Axles with Brass Boxes and Springs, and Railroad Machinery generally. Manufactured and for sale by

E. S. NORRIS.

April 11, 1849.

Hydraulic Cement.



HYDRAULIC CEMENT, OF BEST QUALITY, manufactured at their works, for sale in lots to suit purchasers.

Also, Ground Lime, a superior article for Builders.

ISAAC FRYER, Sec'y.

January 19, 1850.

ly

RAILROADS.

EASTERN RAILROAD.

WINTER ARRANGEMENT.

On and after Monday, October 8, 1849, trains leave Boston daily (Sundays excepted);
For Lynn, 7, 8½, 10 a.m., 12½, 2½, 4, 4½, 6½, p.m.
Salem, 7, 8½, 10 a.m., 12½, 2½, 4, 4½, 6½, p.m.
Manchester and Gloucester, 10 a.m., 4 p.m.
Newburyport, 7, a.m., 12½, 2½, 4, p.m.
Portsmouth, 7, a.m., 2½, 4, p.m.
Portland, Me., 7, a.m., 2½, p.m.
And for Boston,
From Portland, 8½ a.m., 4 p.m.
Portsmouth, 7, 10½*, a.m., 6½*, p.m.
Newburyport, 7½, 11½*, a.m., 3½, 7*, p.m.
Gloucester, 7½, a.m., 1½ p.m.
Manchester, 8 a.m., 2 p.m.,
Lynn, 7½, 8½*, 9½, 10½ a.m., 12 55*, 2½ 4½* 8½* p.m.
Salem, 7½, 8½*, 9*, 10½ a.m., 12 40*, 2½ 4½*, 8*, p.m.

* Or on their arrival from the East.

Freight trains each way daily. Office 17 Merchants' Row, Boston.

Feb. 3. **JOHN KINSMAN**, Superintendent.

BOSTON & LOWELL RAILROAD.

Passenger trains run as follows, viz.:

- Upper Railroad Trains.
- Leave Boston at 7½ a.m., 12 m. and 4½ p.m.
- Leave Lowell at 8 a.m., 1 40 m. and 7 p.m.
- Accommodation Trains.
- Leave Boston at 7 5 and 9½ a.m., 2½, & 6½ p.m.
- Leave Lowell at 7 and 10 a.m., 3½, and 6 p.m.
- Woburn Branch Trains.
- Leave Woburn Centre at 6½, 7½, and 9½, a.m., 1½ p.m.
- Leave Boston at 8½, 11½ a.m., 3, 5½ and 7 p.m.
- On Saturdays, an extra train leaves Woburn centre at 9 p.m. and Boston at 10 p.m.

WALDO HIGGINSON,
Agent Boston and Lowell Railroad Cor.
Boston, October 5, 1849.

BOSTON AND MAINE RAILROAD.

Winter Arrangement, 1850.

Outward Trains from Boston

For Portland at 7 a.m. and 2½ p.m.
For Rochester at 7 a.m., 2½, 3½ p.m.
For Great Falls at 7 a.m., 2½, 3½ p.m.
For Haverhill at 7 and 9½ a.m., 12m., 2½, 4½, 5½, p.m.
For Lawrence 7, 7½, 9½ a.m., 12m., 2½, 4½, 5½, p.m.
For Reading 7, 9½ a.m., 12m., 2½, 4½, 5½, 6½, 7½, 9½ p.m.
For Medford 7½, 9½ a.m., 12½, 2½, 4½, 5½, 6½, 7½, 9½ p.m.
The Station in Boston is on Haymarket Square.

CHAS. MINOT, Super't.

January 10, 1850.

NEW YORK AND HARLEM RAILROAD. NEW ARRANGEMENT.

On and after Wednesday, October 17th, 1849, the Cars will run as follows, (Sundays excepted) until further notice:
Trains will leave the City Hall, New York, for—
Harlem and Morrisania at 6½, 8, 10, 11, 12 a.m., 2, 3½, 4, 5½ p.m.
New Village, at 8½, 10, 12 a.m., 3½, 5, 6½ p.m.
Fordham and Williams' Bridge, at 8½, 10, 12 a.m., 2½, 3½, 5, 6½ p.m.
Hunt's Bridge, Underhill's and Hart's Corners, at 8½, 10 a.m., 3½, 5 p.m.
Tuckahoe and White Plains, at 8½, 10 a.m., 2½, 3½, 5 p.m.

Pleasantville, New Castle, Bedford, Mechanicville, Purdy's, Croton Falls, and intermediate stations, on signal, 8½ a.m., 2½, 3½ p.m.

Brewster's, Towns'r, Patterson, Paulding's, South Dover, Dover Furnace, and Dover Plains, 8½ a.m., 2½ p.m.

NOTICE—Passengers are reminded of the great danger of standing upon the platform of the cars, and hereby notified that the practice is contrary to the rules of the Company, and that they do not admit any responsibility for injury sustained by any passenger upon the platforms, in case of accident.

Returning to New York will leave
Harlem and Morrisania at 6 08, 7½, 8 37, 9, 10 6, 12 a.m., 1 43, 3 07, 3½, 5, 5 47 p.m.

New Village, at 5 58, 8 27, 9 56 a.m., 1 33, 2 57, 5 35 p.m.

Fordham and William's Bridge at 5½, 8 14, 9 43, 10 57 a.m., 1 20, 2 44, 5 24 p.m.

Hunt's Bridge at 8 04, 9 33 a.m., 2 34, 5 16 p.m. On signal.

Underhill's, at 7 55, 9 23 a.m., 2 26, 5 10 p.m. On signal.

Tuckahoe at 7 53, 9 18, 10 40 a.m., 2 23, 5 08 p.m.

Hart's Corners at 7 38, 9 03 a.m., 2 08, 4 54 p.m.—On signal.

White Plains at 7½, 8 55, 10 20 a.m., 2, 4 47 p.m.

Davis' Brook at 8 40, 10 11 a.m., On signal. 4 39 p.m. On signal.

Unionville, 8 27, 10 11 a.m. On signal. 4 29 p.m.—On signal.

Pleasantville at 8 20, 9 56 a.m., 4 24 p.m.

Champlain, at 8 10, 9 50 a.m. On signal. 4 18 p.m. On signal.

New Castle at 7 56, 9 38 a.m., 4 07 p.m.

Bedford at 7 46, 9 32 a.m., 4 02 p.m.

Mechanicville at 7 36, 9 22 a.m., 3 52 p.m.

Golden's Bridge, 7 28, 9 17 a.m. On signal, 3 47 p.m. On signal.

Purdy's at 7 20, 9 09 a.m., 3 39 p.m.

Croton Falls, at 7½, 9 04 a.m., 3 34 p.m.

Brewster's, at 8 50 a.m., 3 20 p.m.

Towne's, at 8 35 a.m., 3 05 p.m.

Paterson, at 8 27 a.m., 2 57 p.m.

Paulding's, at 8 17 a.m., 2 47 p.m.

South Dover, 8 02 a.m., 2 32 p.m.

Dover Furnace, 7 55 a.m., 2 25 p.m.

Dover Plains, at 7 45 a.m., 2 15 p.m.

The trains for Harlem and Morrisania leaving City Hall at 6½, 8, 10, 11, 12, 2, 4 and 6½, returning from Morrisania and Harlem at 6 08, 7½, 8, 9, 12, 1 43, 3 07, 3½ and 5 o'clock, will land and receive passengers at 27th 42d, 51st, 61st, 79th, 86th, 109th, 115th, 125th and 132d streets.

The Dover Plains train from New York at 2½ p.m., returning leaving Dover Plains at 7½ a.m., will not stop between White Plains and New York, (except Tuckahoe, Williams' Bridge and Fordham,) unless to leave passengers coming from above Croton Falls.

A car will precede each train ten minutes to take up passengers in the city. The last car will not stop, except at Broome st. and 27th street.

Freight Trains leave New York at 1 o'clock p.m.—

Returning, leaves Dover Plains at 12 o'clock m.

For Sunday Arrangements, see hand bills.

M. SLOAT, Sup'r.

Albany and Schenectady Railroad Co.
Albany, August, 1849.

AMERICAN RAILROAD JOURNAL.

CENTRAL RAILROAD—FROM SAVANNAH
to Macon. Distance 190 miles.

This Road is open for the transportation of Passengers & Freight.
 Rate of Passage - \$8 00. Freight -
 On weight goods generally, 50 cts. per hundred
 On measurement goods - 13 cts. per cubic ft.
 On brls. wet (except molasses and oil) 1 50 per barrel.
 On brls. dry (except lime) - 80 cts. per barrel.
 On iron in pigs or bars, castings for mills, and unboxed machinery - 40 cts. per hundred
 On hhds. and pipes of liquor, not over 120 gallons - \$5 00 per hhd.
 On molasses and oil - \$6 00 per hhd.
 Goods addressed to F. WINTER, Agent, forward ed free of commission.

THOMAS PURSE,
Gen'l Sup't Transportation.

THE WESTERN AND ATLANTIC RAILROAD.—This Road is now in operation to Oothcaloga, a distance of 80 miles, and connects daily (Sundays excepted) with the Georgia Railroad.

From Kingston, on this road, there is a tri-weekly line of stages, which leave on the arrival of the cars on Tuesday, Thursday and Saturday, for Warrenton, Huntsville, Decatur, and Tuscaloosa, Alabama, and Memphis, Tennessee.

On the same days the stages leave Oothcaloga for Chattanooga, Jasper, Murfreesborough, Knoxville and Nashville, Tennessee.

This is the most expeditious route from the east to any of these places.

CHAS. F. M. GARNETT,
Chief Engineer

GREAT NORTHERN & SOUTHERN MAIL ROUTE. From New York to Charleston, S. C. daily, via Philadelphia, Baltimore, Washington City, Richmond, Petersburg, Weldon and Wilmington, N. C.

Travellers by this route, leaving New York at 4 p.m., Philadelphia at 10 p.m., and Baltimore at 6 a.m., proceed without delay at any point on the route, arriving at Richmond, Va., in a day, and at Charleston, S. C., in two and half days from New York.

Through tickets from New York to Charleston, \$20.00
 " " Baltimore to Richmond, 7 00
 " " Petersburg, 7 50

For tickets to Richmond and Petersburg, or further information, apply at the *Southern Ticket Office, adjoining the Washington Railroad Ticket Office, Pratt Street, Baltimore*

STOCKTON & FALLS.

October, 1849.

S. T. LAWRENCE & ATLANTIC RAILROAD COMPANY.

Notice is hereby given that the

Trains run twice per day between Montreal and St. Hyacinth, leaving each terminus alternately, until further notice.

Leaving St. Hyacinth at - - - 7 am.
 " " " - - 3 pm.
 Leaving Montreal at - - - 10 am.
 " " " - - 6 pm.

THOMAS STEERS, Secretary,
May 31, 1849.

CORROSIVE SUBLIMATE.

THIS article now extensively used for the preservation of timber, is manufactured and for sale by POWERS & WEIGHTMAN, manufacturing Chemists, Philadelphia.

Jan. 20, 1849.

Engine and Car Works,
PORTLAND, MAINE.

THE PORTLAND COMPANY, Incorporated August 8th, 1846, with a capital of \$250,000, have erected their extensive Works upon the deep water of Portland Harbor, and receive and transport, to and from their works direct, to and from vessels of any class.

They now manufacture to order, and deliver upon the Railroads running in each direction from the city, or on shipboard as wanted, Locomotive, Stationary, or Steam Boat Engines; Passengers, Mail, Freight, Earth and Hand Cars; Railway Frogs, Switches, Chairs and Castings; and every other description of Machinery.

HORACE FELTON,
Superintendent.

JAMES C. CHURCHILL,
General Agent and Clerk.

C. W. Bentley & Co.
IRON Founders, Portable Steam Engine Builders and Boiler Makers, Corner Front and Plowman Sta., near Baltimore St. Bridge,

BALTIMORE, MARYLAND.

Their Engines are simple in their construction, compact and durable; they require no brick work in setting them, and occupy but a small space (a six horse power engine and boiler, standing on a cast iron plate of three by six feet.)

They also manufacture Major W. P. Williamson's new oscillating Engine; a superior article, combining cheapness and simplicity (one of which may be seen in operation at their shop.) Both of these engines are adapted to any purpose where power is required, and may be made of any capacity; and for economy in use of fuel are unsurpassed.

All kinds of machinery made to order. Steam Generators, Force Pumps, Wrought Iron Pipes and Fittings for Steam, Water, Gas, etc., constantly on hand, Baltimore, June 6, 1849.

PHILADELPHIA CAR MANUFACTORY,

CORNER SCHUYLKILL 2D AND HAMILTON STS.,

SPRING GARDEN, PHILADELPHIA CO., PA.

Kimball & Gorton,

Having recently constructed the above works, are prepared to construct at short notice all kinds of

RAILROAD CARS, Viz.:

Passenger Cars of all classes—Open and Covered Freight and Express Cars—Coal Cars—Hand Cars & Trucks of all descriptions.

They are also prepared to furnish Chilled Wheels of any pattern. Car Wheels & Axles fitted and furnished. Snow Ploughs and Tenders made to order. Steel and other Springs always on hand.

All orders will be filled at short notice, and upon as good terms as at any other establishment in the country. Omnibuses from the Exchange run within one square of the manufactory every 10 minutes during the day. Philadelphia, June 16, 1849.

1y25

Patent India Rubber Steam Packing.

THIS article, made by the subscriber, who alone is authorised to make it, is warranted to stand as high a degree of heat as any that has been or can be made by any person—and is the article which has made the reputation of India Rubber Steam Packing and the demand therefor. A large assortment of all thicknesses requisite for any description of engines, steam pipes, valves, etc., constantly on hand and for sale by the manufacturer and patentee, who will give every information regarding its properties, mode of use, etc. at the warehouse. JOHN GREACHEN, JR.,

99 Broadway, opposite Trinity Church.

New York, October, 1849.

FAIRBANKS' RAILROAD SCALES.

THE subscribers are prepared to construct at short notice, Railroad and Depot Scales, of any desired length and capacity. Their long experience as manufacturers—their improvements in the construction of the various modifications, having reference to strength, durability, retention of adjustment, accuracy of weight and dispatch in weighing—and the long and severe tests to which their scales have been subjected—combine to ensure for these scales the universal confidence of the public.

No other scales are so extensively used upon railroads, either in the United States or Great Britain;—and the managers refer with confidence to the following in the United States.

Eastern Railroad. Boston & Maine Railroad.
 Providence Railroad. Providence and Wor. Road.
 Western Railroad. Concord Railroad.
 Old Colony Railroad. Fitchburg Railroad.
 Schenectady Railroad. Syracuse and Utica Road.
 Balt. and Ohio Railroad. Baltimore and Susq. Road.
 Phila. & Reading Road. Schuylkill Valley Road.
 Central (Ga.) Railroad. Macon and Western Road.
 New York and Erie Railroad.

And other principal Railroads in the Western, Middle and Southern States.

E. & F. FAIRBANKS & CO.

St. Johnsbury, Vt.

Agents, { FAIRBANKS & CO., 81 Water St., N. Y.
 A. B. NORRIS, 196 Market St. Philadelphia.

April 22, 1849.

1y17

Coal.

CUMBERLAND SEMI-BITUMINOUS COAL
superior quality for Locomotives, for sale by

H. B. TEBBETTS

No. 40 Wall St., New York.

lm19

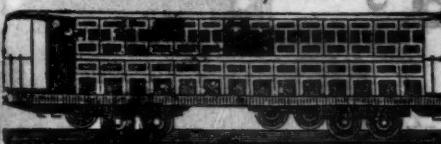
ENGINEERS' AND SURVEYORS'
INSTRUMENTS MADE BY
EDMUND DRAPER,
Surviving partner of
STANCLIFFE & DRAPER.



No 23 Pear street, below Walnut,
near Third, Philadelphia.

CAR MANUFACTORY

CINCINNATI, OHIO.



K ECK & DAVENPORT WOULD RESPECTFULLY call the attention of Railroad Companies in the West and South to their establishment at Cincinnati. Their facilities for manufacturing are extensive, and the means of transportation to different points speedy and economical. They are prepared to execute to order, on short notice, Eight-Wheeled Passenger Cars of the most superior description. Open and Covered Freight Cars, Four or Eight-Wheel Crank and Lever Hand Cars, Trucks, Wheels and Axles, and Railroad Work generally.

Cincinnati, Ohio, Oct. 2, 1848.

440

MACHINE WORKS OF ROGERS KETCHUM & GROSVENOR, Patterson, N. J. The undersigned receive orders for the following articles manufactured by them of the most superior description in every particular. Their works being extensive, and the number of hands employed being large, they are enabled to execute both large and small orders with promptness and dispatch.

Railroad Work.—Locomotive Steam Engines and Tenders; Driving and other Locomotive Wheels, Axles and Springs and Flange Tires; Car Wheels of Cast Iron a variety of patterns and chills; Car Wheels of Cast Iron with wrought tires; Axles of best American refined iron; springs; boxes and bolts for cars.

Cotton, Wool and Flax Machinery of all descriptions and of the most improved patterns, style and workmanship.

Mill gearing and millwright work generally, hydraulic and other presses; press screws; callenders; lathes and tools of all kinds; iron and brass castings of all descriptions.

ROGERS, KETCHUM & GROSVENOR,
Patterson, N.J. or 74 Broadway, New York.

Plumbago, or Black Lead,

BLACK LEAD IN ITS CRUDE STATE, AND Black Lead Paints, prepared for various purposes. This paint is peculiarly adapted for the covering of all kinds of iron railing, or iron work wherever exposed; such as railroad bars, anchors, bolts for vessels, etc. It makes the most durable paint to protect woodwork from moisture, and the indestructable nature of the body of it peculiarly fits it for covering the inside of depots, roofs of buildings, and all wood work exposed to fire.

The mine from which this article is taken is near Raleigh N. C. It has been examined by many of the most scientific men in this country, who all concur in pronouncing it of the best quality. In the fourth vol. of the American Journal of science, Professor Silliman speaks of it in the following manner: "The Plumbago from North Carolina is of a very fine quality and appears well adapted for pot & crayons." Professor Dewy speaks of it "as the finest he ever saw." Professor Olmstead, now of Yale College in his geological report of the State of North Carolina, Page 5 says—"Not long since I received a letter from a gentleman in Vermont who contemplated setting up the manufacture of Black Lead Pots or Crucibles, requesting some particulars respecting this Plumbago, having been informed on the highest authority, that it was the best that could be procured within the United States."

It is a very fine article and superior for Crucibles also for Pots, etc., when the composition of vicious minerals is properly made to suit it, and may be had in any reasonable quantities of the subscriber on liberal terms at Raleigh North Carolina or at James Holme 55 West St. New York.

Sep., 7th 1849.

Richard Smith

FOWLER M. RAY'S
METALLIC INDIA RUBBER CAR SPRINGS.

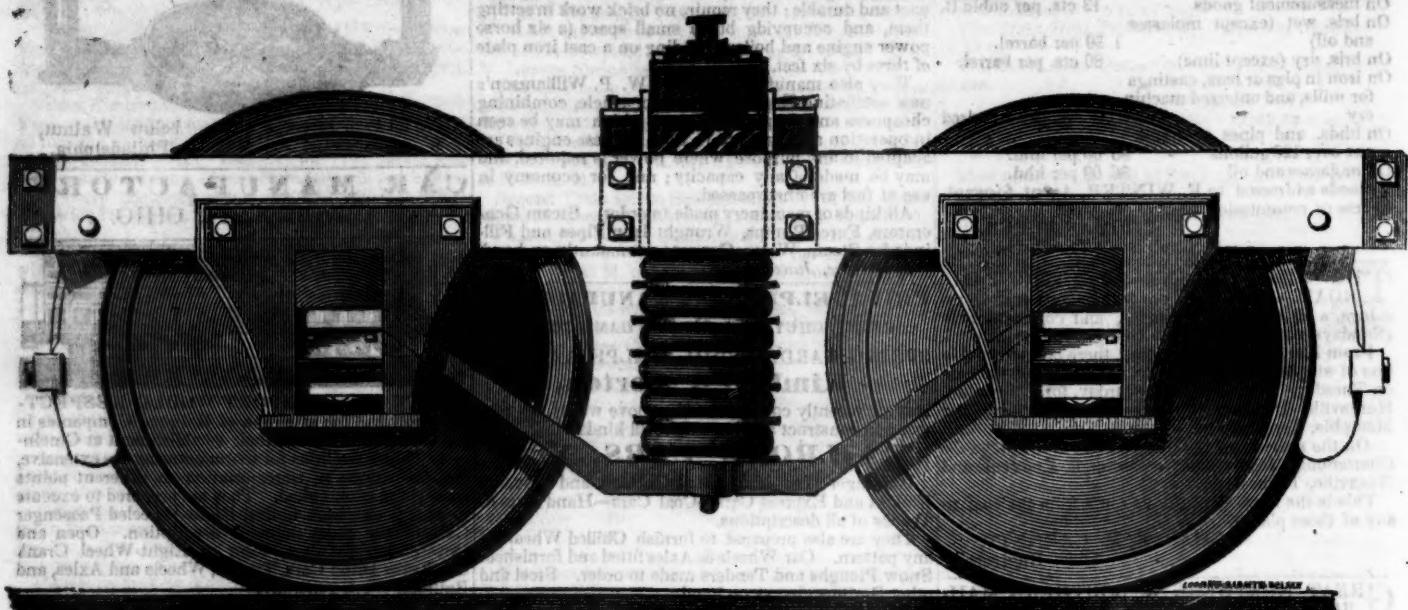


Fig. 1.

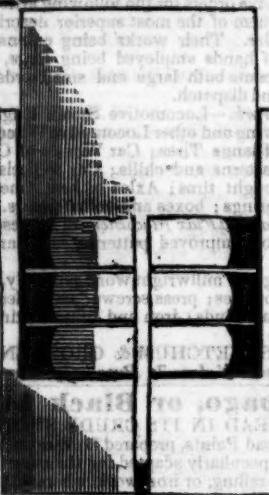


Fig. 2.

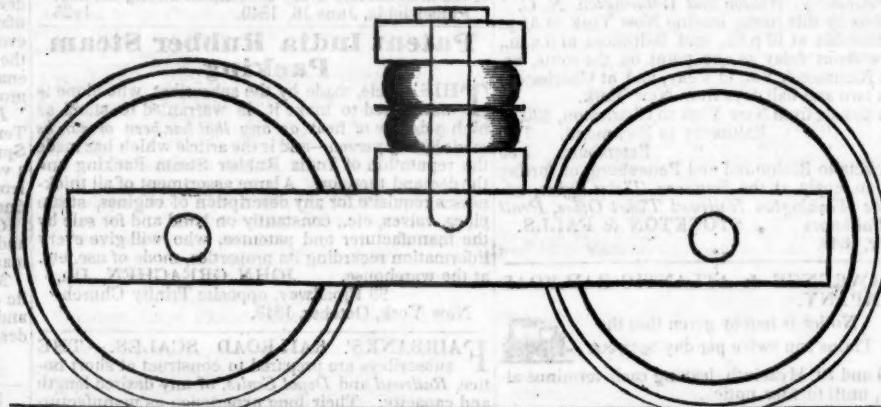


Fig. 3.

So much has been published for the purpose of misleading the public in regard to the inventorship of the India-rubber Railroad Spring, patented in the United States by Mr. W. C. Fuller, that the New England Car Company, proprietors of this invention, have deemed it proper, for the information of Railroad Companies, Car Builders and the public generally, to lay before them the facts upon which they found their claim to this invention, and to a Patent therefor.

Cut No. 1, Represents a cross section of the first model made by Mr. Tucker, under the direction of Mr. Ray, in the summer of 1844, and to which Mr. Tucker, Mr. Bradley and Mr. Bannister testify as being the model marked "B."

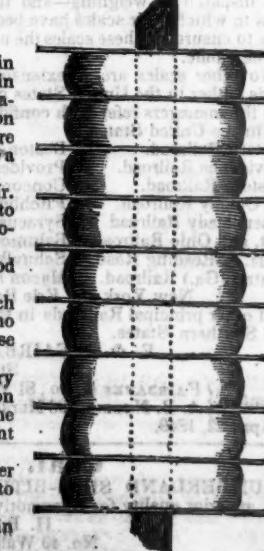
Cut No. 2, Represents the model made in 1845, to which Mr. Osgood Bradley and Gen. Thos. W. Harvey have testified.

Cut No. 3, Represents a rough sketch made by Mr. Ray in 1844, which he gave to a man about departing for England to take out some patents, who promised to write to Ray after his arrival in that country—which promise he has probably forgotten.

Mr. W. C. Fuller, of England, patented the above Spring in that country on the 23d October, 1845. He filed his enrollment April 23d, 1846, and on the 23d October, 1846, he took out a patent in the United States under the title, "For Improvement in Railway Carriages," when the improvement consisted in the spring, and not in the carriage.

The reader will perceive by the annexed testimony, that the India-rubber Railroad Car Spring was invented by Mr. Ray about two years previous to the date of Mr. Fuller's enrollment.

The Depositions are omitted for want of room, but will be published in full in the course of a few weeks.



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136 NASSAU STREET.